Key Performance Indicator Disclosures by Large UK Private and Public Listed Companies

AYLWIN YAFELE

A thesis submitted in partial fulfilment of the requirements of

Bournemouth University for the Degree of Doctor of Philosophy

August 2012

Centre for Finance and Risk

The Business School, Bournemouth University

Copyright

Abstract

Key Performance Indicator Disclosures by Large UK Private and Public Listed Companies

This study aims to investigate the degree of compliance by large UK private and public listed companies with the Companies Act 2006 section 417 (6) requirement to disclose KPIs in their annual reports. Specifically, the study investigates the extent of KPI disclosures by 410 UK companies comprising the largest 205 private limited and largest 205 public listed companies. The study also examines whether corporate governance mechanisms and company specific characteristics influence the extent of KPI disclosures in the annual reports of these companies. The extent of KPI disclosures in this study is measured using three indices to quantify KPI disclosures. Some hypotheses for the independent variables were developed and tested using the Ordinary Least Squares (OLS) regression method to determine whether corporate governance and company specific characteristics are associated with the extent of KPIs disclosure by private, public listed and the pooled companies. In terms of the extent of disclosure, the results suggest that approximately 51% of private companies and 90% of public listed companies disclose at least one KPI in their annual reports. The OLS regression results indicate that corporate governance mechanisms (proportion of non-executive directors, board size and director share ownership) and company specific characteristics (company size and profitability) are significantly associated with the extent of KPI disclosures by private, public listed and the pooled companies. The frequency of board meetings and multinationality do not significantly explain disclosure extent and comprehensiveness. The overall conclusion of this research is that private companies do not seem to comply with the requirements to disclose KPIs and that corporate governance mechanisms are important in ensuring compliance with the requirement to disclose KPIs. The results have important implications for policy makers and accounting regulators such as the Accounting Standards Board in general, and in particular the Financial Reporting Review Panel (FRRP) which is charged with the responsibility of ensuring that large private and public listed companies comply with extant regulatory framework.

Table of Contents

List of Tables

List of Figures

List of Appendices

Acknowledgements

"When you learn, teach. When you get, give."

(Dr Maya Angelou)

Completing this work is a huge step towards my career and life aspirations. I am grateful and hugely indebted to all those who have contributed to my achievements. I may never be able to repay the invaluable support I have received and hope that my commitment to this work demonstrates and is an acceptable gesture of my appreciation.

My deepest gratitude goes to my supervisors Professor Ven Tauringana and Professor Philip Hardwick. Words could not express how grateful I am to both of you for the mentoring, enormous intellectual guidance and encouragement you provided me. Prof. Ven, you took me under your wings, your thoughtfulness, advice, continued support and encouragement made my work much easier in this lonely, long and winding road. Many thanks go to all the academic and administration staff at the Business School at Bournemouth University.

Grateful acknowledgement is owed to my parents for their love, support and supplication. Without their encouragement and prayers I could not have finished my study. My brothers; for spurring me on when the going got tough. Special acknowledgement also goes to my partner Sophia for her patience, encouragement and understanding. Thank you to Ronald, Tendai and Dr. Martin for assistance in verifying the disclosure profiles. I am grateful to my colleagues; Elvira, Sukanya, Isaac, Kola, Ishmael, Savvina and Salah who were generous at offering their ideas. I greatly thank my friends, Tendai and Adam for your insight and constantly reminding me to focus on the bigger picture. To Dr. Barbara, thank you for introducing me to the world of photography for those times I needed to clear my mind.

Lastly I thank the late great Mr J.A. Chinamasa of Kutama College not only for moulding a boy into a man but for equipping me with great lessons of life. I hope to give back twice as I have received. Thank you all.

Declaration

This thesis contains no material that has been accepted for the award of any other degree or diploma in any university or institution. To the best of my knowledge and belief, this thesis contains no material published or written by another person or group of persons, except where due reference is made in the thesis.

Aylwin Yafele

August 2012

List of Acronyms

AAA	American Accounting Association
ACCA	Association of Chartered Certified Accountants
Adjusted R^2	Adjusted Squared Multiple Correlation
AGM	Annual General Meeting
AICPA	American Institute of Certified Public Accountants
AIMR	Association of Investment Management and Research
AMD	Accounting Modernisation Directive
AMEX	American Stock Exchange
ANOVA	Analysis of Variance
APB	Accounting Principles Board
ARA	Annual Report and Accounts
ASB	Accounting Standards Board
ASC	Accounting Standards Committee
ASSC	Accounting Standards Steering Committee
AUDSIZE	Audit committee size
BDMEET	Frequency of board meetings
BR	Business Review
BRP	Blue Ribbon Panel
CA	Companies Act
COMP	Comprehensiveness
COSIZE	Company size
CSR	Corporate Social Responsibility

DJIA	Dow Jones Industrial Average
DSHARE	Director share ownership
D-W	Statistic Durbin-Watson Statistic
EEC	European Economic Community
EMH	Efficient Market Hypothesis
EPS	Earnings per Share
EU	European Union
EU AMD	European Union Accounts Modernisation Directive
F – ratio/F-statistic	Fisher statistic
FAFBT	Financial Accounting Foundation Board of Trustees
FASB	Financial Accounting Standards Board
FDI	Foreign Direct Investment
FERF	Financial Executives Research Foundation
FRC	Financial Reporting Council
FRRP	Financial Reporting Review Panel
FRS	Financial Reporting Standards
FSA	Financial Services Authority
FTSE	Financial Times and the London Stock Exchange
FTSE100	FTSE Index for Top 100
FTSE250	FTSE Index for the Next Top 250 LSE Listed Companies after FTSE100 Companies
FTSE350	FTSE Index Combining FTSE100 and FTSE250 Companies
FVA	Fair Value Accounting
FVE	Fundamental Valuation Efficiency
FZT	Fisher's Z Transformation

GAAP	Generally Accepted Accounting Principles
GB	Great Britain
GEAR	Gearing ratio
HMSO	Her Majesty's Stationery Office
IAE	Information Arbitrage Efficiency
IAS	International Accounting Standards
IASB	International Accounting Standards Board
IASC	International Accounting Standards Committee
IC	Intellectual Capital
ICAEW	Institute of Chartered Accountants in England and Wales
ICAS	Institute of Chartered Accountants of Scotland
ICB	Industrial Classification Benchmark
ICD	Intellectual Capital Disclosures
IFRS	International Financial Reporting Standards
IPO	Initial Public Offering
IR	Interim Report
GFC	Global Financial Crisis
K-ALPHA	Macro for computing Krippendorff's Alpha Reliability Estimate
KPI	Key Performance Indicator
KPISCORE	Key performance indicator score
KPIWC%	Key performance indicator word count percentage
LQDT	Liquidity
LSE	London Stock Exchange
LSTAT	Listing status

MC	Market for Capital
MD&A	Management Discussion and Analysis
MI	Market for Information
ML	Market for Lemons
MLIST	Multiple listing status
MULTIN	Multinationality
N/A	Not Applicable
NASDAQ	National Association of Securities Dealers Automated Quotations
NSE	Nairobi Stock Exchange
NYSE	New York Stock Exchange
OFR	Operating and Financial Review
OLS	Ordinary Least Square
PA	Preliminary Announcement
PCC	Private Company Council
PE	Price Earnings
PNED	Proportion of non-executive directors
PROF	Profitability
PWC	PriceWaterhouseCoopers
R^2	Squared Multiple Correlation
RS	Reporting Standards
S&P500	Standard and Poor's 500 Index
SAC	Supplementary Amounts and Comparison Attribute
SEC	Securities and Exchange Commission
SGX	Singapore Exchange Limited

SPSS	Statistical Package for the Social Sciences
SSAP	Statements of Standard Accounting Practice
SWAF	Swiss Financial Analyst Federation
TOC	Theory of Constraints
T-statistic/T-test	Test-Statistic
UK	United Kingdom
UKGAAP	UK Generally Accepted Accounting Principles
US	United States (of America)
VaR	Value at Risk
VIF	Variance Inflation Factor
WCOUNT	word count

Chapter 1

Introduction and Research Overview

1 Introduction and Research Overview

1.1 Introduction

The importance of key performance indicators (KPIs) dates back to 1903 when Henry Ford used them in order to streamline the production process. This research is about the nature and disclosure of key performance indicators (KPIs) in company annual reports of United Kingdom (UK) firms. KPIs are 'factors by reference to which the development, performance or position of the business/entity can be effectively measured as determined by the directors. They are quantified measurements that reflect the critical success factors of the entity and disclose progress towards achieving a particular objective or objectives' (ASB, 2006a). The Companies Act, 2006 as amended by Statutory Instruments 2005 No. 1011 (SI 2005/1011) requires the use of financial and non-financial KPIs in the Business Review (BR) section of the company's annual report as explained below. The relevant section of SI 2005/1011 was effective for years beginning on or after 1 April 2005.

The Business Review (BR) was introduced in order to provide greater disclosure to shareholders. It is a product of the European Union Accounts Modernisation Directive (EU AMD) 2003, which requires companies to produce an enhanced directors' report. According to the Trucost guide (2005), the operating and financial review (OFR) was abolished since the EU AMD now takes precedence and is applicable to medium and large companies registered in Great Britain. The EU AMD allows for a new enhanced BR section in the annual report. It is under the EU AMD that KPIs are required for the analysis of financial and non-financial performance, including environmental and employee matters where relevant.

The Chancellor (then Gordon Brown) announced the abolition of the requirements of the OFR on the 28th of November 2005 with the aim of reducing the regulatory burden on UK companies. In the UK, the requirements of the directive were first implemented in the form of the Operating and Financial Review (ASB., 2005) which extended the requirements of the EU AMD (2003). Directors were thus from April 2006 exempt from disclosing information in the annual report according to the requirements of the OFR. In spite of this, the reporting requirements for the BR are now contained in the Companies Act 2006 (as amended 234ZZB). The EU AMD regulation requires the BR to include certain items of information that provide an understanding of the position, performance and development of the company's business to which the annual report belongs. Bearing in mind that KPIs are factors by reference to which the development, performance or position of the business of the company can be measured effectively. The AMD regulations were set to include analysis of KPIs and where appropriate, analysis using other KPIs including information relating to employee and environmental matters. Section 234ZZB of the CA 2006 however leaves it to the discretion of the management within the reporting firm as to what KPIs are to be reported in the BR section of the annual report. Regulation therefore does not stipulate particular KPIs to be reported nor does it specify how many KPIs are to be reported.

The study aims to investigate the nature of KPI disclosures by analysing some factors which are thought to have an influence on disclosure patterns within listed and private companies. The research will initially assess the extent of KPI disclosures within two categories (large listed and large private UK companies). The study will further investigate the association of disclosure levels with corporate governance mechanisms (proportion of non-executive directors, frequency of board

meetings, proportion of finance experts on board, percentage of shares owned/controlled by directors at annual report date, board size and audit committee size) and company specific characteristics (company size, gearing, profitability, multinationality, profitability, liquidity, multiple listing and listing status). Large companies were chosen because these are believed to exhibit the best reporting practices compared to smaller business entities and hence would be a first-rate starting point in research of this nature.

Another reason for investigating private and public companies is due to their perceived differences. Private companies cannot offer shares and/or debentures to the public whereas public companies can offer their shares to the public. Only public companies can apply for listing on a recognised stock exchange. The differences suggest that public listed companies tend to have a larger shareholder base compared to private limited entities. As a consequence, disclosure patterns differ due to the differences in shareholder base. While there is prolific research on disclosure literature for listed companies (Cooke, 1989a, Ho and Wong, 2001c, Izan, 2006, Mangena and Tauringana, 2007a, Wall and Martin, 2003, Bingfa et al., 2011, Qi et al., 2012), there are hardly any studies on disclosure in respect to private limited companies.

It has been argued in the past that the financial reporting system is incapable of explaining the extra value generated by businesses through new relationships, internally generated assets and knowledge (Wallman, 1996, Wallman, 1997, Starovic and Marr, 2003). The shift in reliance from traditional financial reporting to intellectual capital (IC) reporting within larger companies for valuation purposes paralleled with analyst following is another reason why the researcher has selected to study KPIs reporting of larger companies. A previous study supports this argument

through stating that larger companies face greater demand for information from the financial press and financial analysts than smaller companies (Schipper, 1991, Brennan and Hourigan, 2000, Hassan and Ibrahim, 2012).

In addition, financial markets in the past have used financial measures such as earnings per share (EPS), revenue and profit to measure company success (Beatham et al., 2004). It has however been suggested by Decker et al. (2002) that the historical statement of financial position only captures, on average, approximately 20% of the market value of companies today. They put forward that 80% of their value is made up of intangible assets, non-financial value drivers and the difference between the historical cost and market value of the assets recorded. The disclosure of KPIs allows markets to measure company success according to what managers perceive as the main drivers of the entity's achievements. These include both financial and non-financial measures. Consequently, non-financial measures of performance have attracted considerable interest from regulators, practitioners and academics (Cerf, 1961, Verecchia, 1983, Watson et al., 2002a, Mangena and Tauringana, 2007a, Tauringana and Mangena, 2009).

Private limited companies, public listed and the pooled (private and public listed) set of companies will all be tested using the regression models to be formulated. The models will assess the impact of corporate governance mechanisms and company specific characteristics on the disclosure of KPIs in annual reports. It may be suggested that the main difference between listed and private companies is their ownership structure. As a result, disclosure patterns would differ due to dissimilar stakeholder information needs. As earlier mentioned there is prolific research on disclosure literature for listed companies (Cooke, 1989a, Ho and Wong, 2001c, Izan, 2006, Mangena and Tauringana, 2007a, Wall and Martin, 2003) and

there are hardly any studies on disclosure with respect to private companies such as the work of Tauringana (1997). On the corollary, this research will add to existing literature and present evidence. A sample of cross industry companies would give a reflection of general KPI reporting.

The investigation of the association of company characteristics with disclosure is very important as argued by Buzby (1975) that such an exercise may be used to recommend policy. It is also asserted by Tauringana (1997) that it is important to investigate the impact of certain characteristics on disclosures by unlisted companies to assist in the regulation of accounting and corporate reporting practices. Existing research has largely focused on public listed companies because they have a larger shareholder base as their shares are publicly traded on the stock exchange. Public listed company shareholders are generally regarded as the most important user group of the annual report (ASB, 1999). With 146,762 private limited companies (Companies House, 2009) registered in the UK and a mere 3,051 listed (London Stock Exchange, 2009) on the London Stock Exchange (LSE), listed companies represent a meagre 2.0365% of the total number of companies operating in the UK. It is apparent that private companies contribute significantly to the economy.

The disclosure of KPIs now allows markets to measure company success according to what managers perceive as the main drivers of the entity's achievements which include both financial and non-financial measures. This measure enhances what financial markets have used in the past such as EPS, revenue and profit to measure company success (Beatham et al., 2004). Consequently, non-financial measures of performance have attracted considerable interest from regulators, practitioners and academics (Cerf, 1961, Verecchia, 1983, Watson et al., 2002a, Mangena and Tauringana, 2007a).

The cost of acquiring private company data has limited disclosure research within the field. The study of private company disclosure is however essential because of the economic contribution of such companies hence more specific legislation may be encouraged to enhance the quality and quantity of disclosure. Research reveals that private companies' annual employment growth over a five year period to 2006/7 was 8% compared to 0.4% for FTSE 100 companies, comparative annual growth in sales revenue for the same period was 8% and 6% respectively thus demonstrating the importance of private company economic contribution (I.E. Consulting, 2008).

The comprehensive and quantitative characteristics of KPIs within private companies will provide virtually new knowledge and evidence on the nature of and disclosure patterns among UK private companies. This research also aims to highlight characteristic differences between disclosure patterns of listed firms with those of large private entities. Previous research (Nobes, 1984) in other countries suggests that large private firms behave differently from the bulk of listed companies. This research will therefore establish whether this trend is prevalent in the UK and if so, provide evidence. The findings of the research will contribute by adding to the limited literature (mainly by the accounting profession) on the reporting practices regarding KPIs by UK (non-financial) listed and private companies.

Prior to this study, only Singhvi & Desai (1971), Firth (1979) and Tauringana (1997) have investigated which characteristics influence disclosures by unlisted companies. This study therefore provides further evidence on private limited companies through an investigation of KPI disclosures in their annual reports. In

addition this study will also assess the impact of corporate governance characteristics on KPIs disclosure by unlisted companies. It may arguably be a pioneering study.

Bearing in mind the important economic contributions by private companies in the UK as previously mentioned, numerous studies have been undertaken on the association of company specific characteristics and disclosure within UK listed companies (Roberts and Gray, 1988, Gray and Roberts, 1989, Lutfi, 1989, Gray et al., 1995, Watson et al., 2002a) and they have facilitated policy formulation. The researcher however argues that such studies have been instrumental in disclosure policy formulation but focus on listed company research alone. It is unjust because private companies have not been considered and yet have been proved to be vital to the UK economy. There is also limited published research within the UK investigating the association of corporate governance mechanisms with disclosure, several global studies have however been considered (Chen and Jaggi, 2000, Ho and Wong, 2001c, Haniffa and Cooke, 2002, Eng and Mak, 2003, Aboagye-Otchere et al., 2012, Cormier et al., 2010).

It can be suggested that recommendations should not be made on the basis of partial data (listed company research only) and this research presents additional information (unlisted company KPI disclosure findings) to add on to known information and ultimately presents a more comprehensive account of the nature of KPI disclosure practices across both listed and unlisted industrial firms. A final and major motivation for this study is the fact that existing research investigates the extent of disclosure from the 'demand' side in the sense that the indices used to measure disclosure consist of items information users demand from management and find useful in their decision making. However, these items of information may not necessarily be the most important in terms of evaluating company performance. As a

consequence, the new requirements of the Companies Act (CA) 2006 (section 417) place the onus on the 'supply side' by requiring management to disclose information they consider to be key performance indicators. Research on the extent of KPIs is therefore required since it is currently unknown whether the factors that have been found to affect the extent of disclosure of information demanded by users are the same factors that influence the supply of information considered KPIs by management.

1.2 Objectives of the Research

In light of the requirements for companies operating in the UK to report on KPIs, the main objective of this research is to investigate the extent of KPI disclosures. There will also be three other subsidiary objectives which will be investigated. These will be achieved by determining the association between disclosures within UK listed and private companies with chosen variables. Such will include company specific characteristics (company size, gearing, profitability, liquidity, multinationality, listing status and multiple listing) and corporate governance mechanisms (proportion of non-executive directors, audit committee size, frequency of board meetings, proportion of finance experts, board size and director share ownership). Objectives can be broken down as below:

1. To investigate the extent of KPI disclosures by large private limited and public listed companies operating in the UK.

2. To investigate the influence of corporate governance mechanisms and company specific characteristics[1] on annual report KPI disclosures by private limited companies.

3. To investigate the influence of corporate governance mechanisms and company characteristics on the disclosure of KPIs in the annual reports of public listed companies.

4. To examine the impact of corporate governance mechanisms and company specific characteristics on the disclosure of KPIs in the annual reports of the pooled[2] set of companies.

1.3 Summary of Research Methodology

The research objectives are investigated through a positivist approach. Ryan et al. (2002) suggest that the positivist approach relies on even regularities in closed or close-able systems through isolation and control of variables. Quantitative analysis is therefore applied in this study to assess the relationship between the dependent and independent variables. According to Gibson (2004), numerous studies in business and industry embrace a positivistic paradigm which makes an attempt to reduce the study of a phenomenon to something that can be measured by focusing on large scale empirical hypothesis testing and deductive reasoning. The following sections 1.3.1 and 1.3.2 summarise the data and methods used for the study respectively.

[1] Excluding listing status and multiple listing because these companies do not trade their stocks on recognised stock exchanges.

[2] This is the combined list of data from both private and public listed companies.

1.3.1 Data

The cross section for the empirical analysis is a sample of the 205 largest non-financial UK listed companies' annual reports for the year 2008. In addition to this is a sample of annual reports from the 205 largest private (UK) companies, these were acquired from the Companies House. Non-financial companies were chosen because financial entities have a different set of governing principles so far as disclosures are concerned. The other requirement for the public companies in the sample was that they had to be stock exchange listed. All companies had to have been consistently constituent in the FTSE 350 and the Sunday Times Top Track 100 & 250.

1.3.2 Method

The first stage of the research was to measure the extent of disclosures as in previous studies (Deloitte, 2006b, Black Sun Plc, 2006, Deloitte, 2006a, Accounting Standards Board, 2007, Beattie and Thomson, 2007, Tauringana and Mangena, 2006a, Kanto and Schadewitz, 2000) by scoring KPI disclosure levels against an index. The selected index for each company was the difference between the summation of all the reported KPIs and the summation of irrelevant KPIs (Tauringana and Mangena, 2009). A similar scoring process was repeated for private companies. This method ensures that the level of disclosure is only calculated based on the attributes that are relevant to the entity in question. The disclosure level is therefore measured as the amount of disclosures made as a percentage of the maximum possible relevant disclosures.

The study measures the disclosure of KPIs using three methods. These KPI measures constitute the dependent variable of the study. The disclosure index will be constructed on the assumption that annual reports are useful to many users. As a result, the items included in the disclosure index will be wide ranging and not confined to a specific user group as tried and tested in previous research (Tauringana, 1997, Cooke, 1989a, Wallace, 1987, Cooke, 1991, Kyeyune, 2010, Dardor, 2009). Upon reviewing previous studies (for example Cooke, 1989a, Cooke, 1991, Wallace, 1987, Tauringana, 1997, Wallace et al., 1994a, Kaya, 2012, Joseph and Taplin, 2011), it was decided not to attach weights to the items of disclosure, but to take into account their usefulness to different user groups because there usually is no difference between weighted and unweighted disclosure indexes (Spero, 1979, Mangena and Pike, 2004). The first (KPISCORE) was a measure of total number of KPIs disclosed as a proportion of the relevant index. The second measure was the word count (WCOUNT) methodology such as that use by Li et al. (2008b). This method measured the number of words used to measure KPIs as a percentage of the total number of words in the annual report. The third measure assessed the comprehensiveness of the disclosures made (COMP). This method was an aggregate of four sub measures which were presence of a KPI, relevant amount, reason for change and provision of forward looking information (see for example Kyeyune, 2010).

Financial statement variables that have been found in previous studies to be influential to the extent of financial reporting disclosures were considered. They include proportion of non-executive directors (PNED) (e.g. Mangena and Pike, 2005), audit committee size (AUDSIZE) (e.g. Mangena and Pike, 2005, Li et al., 2008b), frequency of board meetings (BOARDM) (e.g. Laksmana, 2008a),

proportion of financial experts (FINEXP) (e.g. Akhigbe and Martin, 2006), board size (BDSIZE) (e.g. Elzahar and Hussainey, 2012), director share ownership (DSHARE) (e.g. Tauringana and Mangena, 2006a), company size (SIZE) (e.g. Beretta and Bozzolan, 2008), gearing (GEAR) (e.g. Zarzeski, 1996), profitability (PROF) (Wallace and Naser, 1995), liquidity (LQDT) (Watson et al., 2002a), multinationality (MULTIN) (Robb et al., 2001), listing status (LSTAT) (Aboagye-Otchere et al., 2012) and multiple listing (MLIST) (Mangena and Pike, 2005, Elzahar and Hussainey, 2012).

The study made use of multiple regressions to examine the relationship between the corporate governance mechanisms and company specific characteristics listed above. The following models were tested:

1. OLS regression was used to assess the influence of the independent variables on the extent of KPI disclosures by private companies using three models.

$$KPISCORE/WCOUNT/COMP = \beta_0 + \beta_1 PNED + \beta_2 AUDSIZE + \beta_3 BDMEET + \beta_4 FINEXP + \beta_5 BDSIZE + \beta_6 DSHARE + \beta_7 COSIZE + \beta_8 GEAR + \beta_9 PROF + \beta_{10} LQDT + \beta_{11} MULTIN + \varepsilon_j$$

2. OLS regression to assess the influence of the independent variables on the extent of KPI disclosures by public listed companies using three models.

$$KPISCORE/WCOUNT/COMP = \beta_0 + \beta_1 PNED + \beta_2 AUDSIZE + \beta_3 BOARDM + \beta_4 FINEXP + \beta_5 BDSIZE + \beta_6 DSHARE + \beta_7 COSIZE + \beta_8 GEAR + \beta_9 PROF + \beta_{10} LQDT + \beta_{11} MULTIN + \beta_{12} MLIST + \varepsilon_j$$

3. OLS regression to assess the influence of the independent variables on the extent of KPI disclosures by the pooled set of companies using three models. Only the private limited disclosing companies were considered in the pooled companies' model and a matching random sample of public companies was used.

$$KPISCORE/WCOUNT/COMP = \beta_0 + \beta_1 PNED + \beta_2 AUDSIZE + \beta_3 BOARDM + \beta_4 FINEXP + \beta_5 BDSIZE + \beta_6 DSHARE + \beta_7 COSIZE + \beta_8 GEAR + \beta_9 PROF + \beta_{10} LQDT + \beta_{11} MULTIN + \beta_{12} MLIST + \beta_{13} LSTAT + \varepsilon_j$$

1.4 Findings of the Research

The results of this study in respect of the first objective reveal that there are significant differences in the level of KPI disclosures between private and public listed companies. It was found that approximately half of the large private companies disclose KPIs in their annual reports while approximately nine in ten public listed companies disclose KPIs in their annual reports. Approximately seven in every ten of the total large companies that were investigated disclosed at least a KPI in their annual reports. Previous studies over the years have indicated that the level of KPI disclosures has gradually increased with time as companies attempt to adapt to the KPIs reporting regulations under CA 2006. Tauringana and Mangena

(2009) for example, found that the level of disclosure in the media industry was approximately 56% prior to 2006 and approximately 75% post 2006.

This research found that three variables, the proportion of non-executive directors (Chen and Jaggi, 2000), company size (Barako et al., 2006b, Branco and Rodrigues, 2008, Alsaeed, 2006, Brüggen et al., 2009) and profitability (Andrikopoulos and Kriklani, 2012b, Ahmad et al., 2003), significantly explain the disclosure of KPI disclosures across all the three models tested which were the extent of KPI disclosures measured by an index, the amount of words used to describe KPIs and the comprehensiveness of the KPIs disclosed by large private limited companies. It was found that the size of the audit committee did not explain the extent of KPI disclosures by private limited companies as measured by KPI score, word count and comprehensiveness. Other studies find contrary results for example Bukh et al. (2005) did not find company size to explain the extent of disclosures, they suggest that the finding might have been influenced by the limited number of observations.

Table 1: Summary of Results[3]

Variable	KPISCORE	WCOUNT	COMP
Private Limited Companies			
PNED	Yes**	Yes***	Yes*
AUDSIZE	No	No	No
BOARDM	Yes***	Yes*	No
FINEXP	Yes**	No	No
BDSIZE	Yes**	Yes***	No
DSHARE	No	Yes***	Yes**
COSIZE	Yes***	Yes**	Yes*
GEAR	Yes**	Yes**	No
PROF	Yes**	Yes***	Yes**
LQDT	No	No	Yes**
MULTIN	No	No	Yes*
Public Listed Companies			
PNED	Yes**	No	Yes**
AUDSIZE	No	No	No
BOARDM	Yes***	Yes***	Yes***
FINEXP	No	No	No
BDSIZE	No	No	No
DSHARE	Yes***	Yes*	Yes**
COSIZE	Yes***	Yes***	Yes*
GEAR	Yes***	Yes**	Yes***
PROF	Yes***	Yes*	Yes***
LQDT	Yes***	Yes**	Yes***
MULTIN	No	No	No
MLIST	No	No	Yes*
Pooled Companies			
PNED	Yes***	Yes***	Yes***
AUDSIZE	Yes***	Yes**	No
BOARDM	No	No	No
FINEXP	Yes**	No	Yes**
BDSIZE	Yes***	Yes***	Yes***
DSHARE	Yes**	Yes***	Yes***
COSIZE	Yes***	Yes***	Yes***
GEAR	No	Yes**	Yes**
PROF	Yes***	Yes***	Yes***
LQDT	Yes*	No	Yes***
MULTIN	No	No	No
LSTAT	No	Yes*	No
MLIST	No	Yes**	Yes***

***. Significant at the 0.01 level, **. Significant at the 0.05 level

[3] The results summarised in the Table 1 above, refer to the reduced samples. OLS for the reduced samples was conducted on only those companies that disclosed KPIs in their annual reports. A set of regression results for non KPI disclosing companies are attached in Appendix 3. Table 6 and 7 in the Data and Research Methodology chapter provide definitions for the variables in the summary of the results table above.

*. Significant at the 0.1 level

In respect of the third objective (public listed companies), it was found that KPIs disclosure extent measured by an index, amount of words used in describing KPIs and the comprehensiveness of KPIs can be explained by six variables as opposed to just three for private companies. The findings in this study are in line with other studies that also found board meetings held in the year (e.g. Vafeas, 1999), proportion of shares owned by the directors (e.g. Mohd Ghazali and Weetman, 2006, Ruland et al., 1990), company size (e.g. Barako et al., 2006b, Branco and Rodrigues, 2008, Alsaeed, 2006, Brüggen et al., 2009), the level of gearing (e.g. Andrikopoulos and Kriklani, 2012b, Cormier and Magnan, 1999, Aerts and Cormier, 2009, Ahmad et al., 2003), profitability (e.g. Andrikopoulos and Kriklani, 2012b) and liquidity (e.g. Barako et al., 2006b, Cooke, 1989a, Belkaoui-Riahi and Kahl, 1978) to significantly influence the extent of disclosures. Other studies such as Laksmana (2008b) found contrary results, for example no association between frequency of board meetings and disclosure yet Conger et al. (1998a) point out that increased meeting frequency could lead to increased effectiveness. Barako (2006b) found no relationship between disclosures and liquidity and Wallace (1994a) found a negative relationship. The results reveal that audit committee size, proportion of financial experts, board size and multinationality do not explain the extent of KPI disclosures in all three models.

The fourth objective relates to the pooled set of companies. The results indicate that the proportion of non-executive directors (Chen and Jaggi, 2000), the size of the board (Yermack, 1996), director share ownership (Mohd Ghazali and Weetman, 2006, Ruland et al., 1990), company size (Barako et al., 2006b, Branco and Rodrigues, 2008, Alsaeed, 2006, Brüggen et al., 2009) and profitability

(Andrikopoulos and Kriklani, 2012b, Ahmad et al., 2003) are significantly related to the extent of KPI disclosures through all three models tested. The frequency of board meetings and multinationality did not explain the extent of KPI disclosures. In the case of the proportion of non-executive directors, Chen and Jaggi (2000) found a positive relationship which is in line with the findings in this study for word count, however a negative relationship was found with the comprehensiveness of disclosures made. Cheng and Courtenay (2006), contrary to the findings in this study, find that board size is not significantly related to disclosure extent.

1.5 Importance and Potential Contribution of the Research

The study is important because it provides further insight into the nature of KPIs that are reported by large listed and private limited firms. The findings of this research will provide investors among other stakeholders with an additional platform from which to make investment decisions particularly those to do with buying, holding or selling stocks. The study also highlights the importance of KPI information to various stakeholders by bringing to light the fact that KPI information shows what makes the business tick from the perspective of management.

The research goes on to present updated disclosure levels and patterns. From this information, it is therefore easy to assess whether the regulations for companies to report on KPIs are meeting their objectives. An assessment on the impact of regulation leads to policy recommendation. In the case of this study, it appears that public listed companies are highly adhering to the regulation to report KPIs but private limited companies perhaps need to be closely monitored to ensure effective KPIs reporting by these business entities especially given that the majority of the companies operating in the UK are private limited entities. The results of this

research show variations from previous research due to the dynamic nature of the business environment.

These findings may be useful to policy makers such as the FRRP by providing them with current information on the nature and state of KPI reporting within the UK. Policy makers may set out optimal disclosure frameworks and identify inconsistencies between the nature of KPI reporting by listed and private companies through investigations of this nature. Evidence of these findings will be instrumental in setting optimum disclosure frameworks. Consequently additional knowledge presented by such a study may aid in avoiding overregulation in the future due to a more comprehensible understanding of KPIs.

The results of this research may also assist policy makers in deciding whether there is need for additional rules to ensure compliance of reported KPIs. It has also been suggested in recent research on the influence of the business review (BR) on KPIs in the UK media sector that KPI disclosure studies benefit policy makers by revealing the characteristics of those firms likely/less likely to report KPIs (Tauringana and Mangena, 2009). By analysing factors that influence the level of disclosures, policy makers can therefore target companies that exhibit certain characteristics in terms of monitoring and perhaps tightening of regulatory requirements as opposed to formulating umbrella policies.

To the academic audience, this research makes some methodological contributions. The study makes use of three different measures for determining KPI disclosures extent. The study makes use of a standard disclosure index (Bukh et al., 2005, Clarkson et al., 2008, Ntim et al., 2011, Nurunnabi et al., 2011, Nurunnabi and Hossain, 2012) and word count (Li et al., 2008b) method as in previous studies. The study contributes in disclosure research by devising a measure for

comprehensiveness. This can be applied to different studies within this branch of research. Comprehensiveness is a proxy for measuring the quality of disclosures. It can therefore be seen that this study is useful to a wide audience including academics, practitioners and shareholders among various stakeholders. The section below provides an outline of the remainder of the thesis.

1.6 Outline of the Research

The rest of the thesis is organised as follows: Chapter 2 reviews financial reporting practices with particular emphasis on annual report disclosures. The empirical literature review conducted discusses studies that have investigated corporate governance mechanisms and company specific characteristics mainly focusing on those variable that were later tested as part of this study. The chapter also discusses some of the possible reasons to conflicting results in previous studies and limitations to disclosure studies which were taken into consideration for the purpose of this study.

In Chapter 3, the focus turns to annual report users and their information needs. This chapter examines several issues which include the aims of financial reporting and what the information needs of different users are. The chapter also investigates KPI information which is a requirement under the prevailing statute. The qualitative characteristics of useful financial information are also discussed. Chapter 4 synthesises evolutionary accounting theories. The chapter is split into two main sections which are capital market based theories. Under this section topics such as the signalling theory and the efficient market hypothesis (EMH) are covered. Stakeholder theory, legitimacy theory and the agency theory are some of the theories that are discussed under the non-capital market based theories.

Chapter 5 discusses the hypotheses development in order to ensure a focus for the investigation. The hypotheses formulated were tested against the extent of KPI disclosures in the annual reports of large UK companies. The thirteen hypotheses are developed from the attributes discussed in the literature review chapter. The rationales for the hypotheses formulated were derived from the previous literature discussed in Chapter 2 and theories that were discussed in Chapter 4. Chapter 6 of the study turns to the sample and methods used in the research. The chapter initially discusses the sample selection and how the annual reports were scored. The choice of statistical tests and explanations of how the relationship between corporate governance mechanisms and company specific characteristics is tested are illustrated through selected models. The chapter explains the validity and reliability considerations applied and closes with a summary and conclusion.

Chapters 7, 8 and 9 present the results for the tests to the hypotheses that were formulated in Chapter 5. These chapters cover the results for private limited companies, public listed companies and the pooled set of companies respectively. The tests carried out are in line with the multiple regression models for the extent of KPI disclosures. The chapters cover results on the extent of KPI disclosures in annual reports, correlations, regressions and diagnostic checks among other things. Finally, Chapter 10 summarises the thesis. The aspects considered in this last chapter include a summary of the research; its contributions, implications, limitations and opportunities for further research.

Chapter 2

Literature Review

2 Literature Review

2.1 Introduction

Disclosure studies have dated back since the 1960s (Cerf, 1961). Since then, there have been numerous researchers who have assessed the influence of company specific characteristics, corporate governance mechanisms and market related variables on financial reporting disclosures in the UK and across the world. Although this research focuses on the disclosure of KPIs, it is important to analyse previous research in disclosure studies for the purpose of clarifying the state of disclosure literature to date. This part of the research will analyse the findings, particularly the variables identified in prior research to be the influencing tools of the extent disclosures.

This chapter summarises previous research, particularly the variable factors thought to influence information disclosure in various financial reporting media with emphasis being placed on annual reports. The analysis is meticulous and looks at previous works from past but by no means all of it. The next section 2.2, of this chapter discusses Previous Research and breaks down company specific characteristics, corporate governance mechanisms and market related variables. This is followed by section 2.3 which summarises previous research. The Limitations in Disclosure studies are outlined in section 2.4 followed by section 2.5 on the Conflicting Results and Possible Explanations. The chapter closes with a Summary and Conclusion in section 2.6.

2.2 Previous Research

2.2.1 Corporate Governance Mechanisms

It is believed that poor corporate governance has become the "Achilles' heel" of many corporations (Okike, 2007). The increase in importance of corporate governance in the 1990's and early 2000's led other researchers to investigate whether ownership and corporate governance characteristics influence the extent of disclosure. Several studies have investigated the influence of corporate governance mechanisms on the extent of information disclosure (for example Eng and Mak, 2003, Ho and Wong, 2001c, Samaha et al., 2012a, Cheng and Courtenay, 2004, Ezat and El-Masry, 2008). Through an analysis of literature, it may be found which and how different governance arrangements influence the level of disclosures. Under corporate governance mechanisms the variables which will be investigated include the proportion of non-executive directors, audit committee size, frequency of board meetings, proportion of financial experts, board size and director share ownership. One of the advantages of investigating these variables is due to their impact in assisting in the control of agency problems.

2.2.1.1 Proportion of Non-executive Directors

The proportion of non-executive directors is measured as a percentage of the total number of members on the board of directors. In a study (Chen and Jaggi, 2000) of 158 Singapore listed firms, it was found that there was a positive relationship between the extent of mandatory disclosures and the proportion of independent directors. Chen and Jaggi (2000) however suggested that non-executive directors are less inclined to significantly influencing firms to disclose more information particularly to outside investors as they are less aligned with the management operations in the case of family owned firms. Another study (Eng and

Mak, 2003) based on the studies of Chen and Jaggi (2000) hypothesised a positive relationship.

As opposed to the above, Barako et al. (2006a) conducted a study in Kenya in which they investigated 54 companies listed on the Nairobi Stock Exchange (NSE). The results indicated a significant negative association between non-executive directors and the extent of voluntary disclosure. An identified limitation of the study is however encapsulated in the operational definition of an independent non-executive director; non-executive directors generally may not be independent.

The major role of boards is in their control functions (Pound, 1995). They are perceived as a monitoring tool to management behaviour and this is perceived as causation for increased disclosures of corporate information (Rosenstein and Wyatt, 1990). A larger proportion of independent directors on the board leads to more effective monitoring of managerial opportunism hence firms may be expected to make a higher proportion of information disclosures (Leftwich et al., 1981, Fama and Jensen, 1983). In this context the increased disclosures are not necessarily a result of reporting on the management and their activities (which may not be desirable) but those of increased exposure of the business and its activities in general to the shareholders. The additional information may range among several disclosure categories such as social and environmental, segmental and voluntary disclosures among many. The quality of disclosures is thought to be enhanced by a higher proportion of independent directors and also reduces the benefits of withholding information (Forker, 1992). It may also be argued that where there are a higher number of non-executive directors, they are likely to bring to the company's reporting structure, good practices that they have gained from working in other

organisations and this is normally aligned with transparency and the reduction of information asymmetry.

Even though there are several studies reporting a positive association between the level of information disclosures and the proportion of non-executive directors (Haniffa and Cooke, 2002, Cheng and Courtenay, 2006). Some report that companies with a large proportion of non-executive directors possibly brings conflict and in turn reducing the level of disclosure (Chaganti, 1985), others simply did not find a relationship between disclosure extent and the quantity of non-executive directors (Ho and Wong, 2001c). It is likely that firms with a fair proportion of non-executive directors may be viewed in positive light by shareholders in terms of independence and accountability.

Tauringana and Mangena (2009) in their research on the extent of KPIs reporting by 32 companies in the UK Media sector found the proportion of non-executive directors to be significantly negatively associated with the level of disclosure (at a 5% level or better). The regression results were contrary to the predicted direction of association and hence difficult to explain as it was thought that non-executive directors would/are expected to protect the shareholders' interests. There is however a possibility that the "results derive from the measure used which does not differentiate between independent and non-executive directors. If the company has a higher proportion of non-independent non-executive directors, the non-executive directors may be influenced by managers and therefore may not compel or encourage KPI reporting in the annual reports" (Tauringana and Mangena, 2009).

Previous studies confirming the influence of non-executive directors on the disclosure of information verify their importance as a governance mechanism that assists in alleviating the agency problem. The importance of non-executive directors

has also been demonstrated in other settings such as positive share price reactions to specific critical events when the firm's board is dominated by non-executive directors. Examples of these events include management buyout announcements (Lee et al., 1992) and tender offer bids (Byrd and Hickman, 1992, Cotter et al., 1997).

Haniffa and Cooke (2002) for example found that corporate governance variables (chairpersons who are non-executive directors and domination of family members on boards) were significantly associated with voluntary disclosure at a 5% level of significance in their study on Malaysian companies. As with board members who are non-executive directors, their study may have contributed in explaining that non-executive directors may be viewed as advocates of transparency. A higher number of non-executive directors may lead to greater influence and greater disclosures. Due to the results that diverge in this area, more research about the variable may be necessary to be undertaken.

2.2.1.2 Frequency of Board meetings

There is very little research on the relationship between the frequency of board meetings and the level of disclosure. Some of the identified studies relating to board meeting frequency related only to its association with company performance (Evans and Weir, 1995, Frey, 1993), discretionary current accruals (Xie et al., 2001), yield spreads (Anderson et al., 2004), board member compensation (Indrarini, 2007), quantity of disclosure (Kent and Stewart, 2008, Tauringana et al., 2008) and timeliness of annual reports (Tauringana et al., 2008). An investigation into previous studies provides an insight into the nature of meeting frequency as an independent variable.

Policy is implemented by senior management, if there are regular meetings between them and directors of the company, this should reduce the scope for discretionary behaviour and therefore lead to superior performance in comparison to those firms who exercise fewer meetings between the board and senior management (Evans and Weir, 1995). Information asymmetry is one of the major causes of the agency problem simply because agents are likely to have accurate, detailed and specific information which the principal is less likely to have. Monitoring can be perceived as a disciplinary device for managers and may bear negative connotations which will lead to reduced effort from managers. Monitoring may therefore be viewed as an indication of distrust (Frey, 1993). Even though studies present evidence of a relationship between the frequency of board meetings and the extent of information disclosure, it may be necessary to strike a balance between too little and too many board meetings in order to reduce agency costs. The researcher does however appreciate that regular meetings allow for potential and existing problems to be identified, rectified or avoided and in turn leading to superior performance.

In a study of the timeliness of annual reports of Kenyan corporations; it was suggested that the frequency of board meetings would negatively be associated with timeliness (Tauringana et al., 2008), where timeliness here refers to the publication of the annual report in good time, with the legal restricts. As afore-mentioned, the rationale to their finding was that meeting frequency allows for the identification and addressing of problems as they arise and thus a quicker release of the annual report. It may however be argued that other conditions may have led to this finding because where a board meets more frequently, it entails that more issues will be identified and therefore may result in more time being taken to straighten out the identified issues. Further research on this variable is certainly needed to clarify the status quo. The frequency of board meetings was also found to be positively associated with firm performance. In another study, firms which were subject to prior poor performance were found to have improved following years of abnormal activity in terms of the frequency of board meetings held in the relevant periods (Vafeas, 2000).

Kent and Stewart (2004) found that the quantity of disclosure was positively associated with the frequency of board meetings. The suggestion from several previous studies points out that boards with regular meetings are more likely perform their duties in a more diligent fashion than those that do not meet as regularly (Lipton and Lorsch, 1992, Conger et al., 1998a, Vafeas, 1999, Kent and Stewart, 2008). Further research needs to be conducted in this area judging by previous results and limited research particularly in the UK.

2.2.1.3 Proportion of Finance Experts on Board

There is relatively little research that has been devoted to analysing the relationship between the proportion of finance experts on the board of directors and

the extent of information disclosure in annual reports. Prior studies for example found that capital markets react positively to the appointment of non-executive directors with financial expertise particularly to the audit committees (DeFond et al., 2005). This suggests that finance expertise on the audit committee is perceived by the market as enhancing the quality of financial reporting.

Some research revealed that the audit committee finance expertise can positively explain the extent of information disclosure (Mangena and Pike, 2005). The finding may suggest that financial experts are effective in alleviating the problem of information asymmetry where finance experts provide more detail in the financial reporting of business entities to stakeholders. Abbott et al. (2000) however found a negative relationship between finance experts and the level of disclosures. Gray directors with accounting expertise may be thought of as ones to produce less transparent disclosures in company annual reports on comparison.

This requirement by the NYSE and LSE for example implies that financial experts are likely to address the relevant and appropriate questions to the management and identify mishaps concerning the firm's financial reporting. Several researchers (Abbott et al., 2004, Bédard et al., 2004, Davidson et al., 2004, DeFond et al., 2005, Krishnan and Visvanathan, 2007, Chan and Li, 2008) have backed this notion. It may further be suggested that the board of directors are also very instrumental in the construction of the financial report hence it is important to have finance experts on that board. Finance experts on the board of directors may be perceived as backers of disclosure transparency.

It has been suggested by other academics that insiders who possess financial expertise are related to lower disclosure transparency. Felo (2009) for example suggests that directors with accounting expertise are related to lower annual report

transparency. These results generally indicate that regulators and other stakeholders may want to focus on board composition (independence and expertise) in addition to audit committee composition when considering ways to enhance disclosure transparency. Due to the scarcity of research in this area, further research is important in order to establish the impact of financial experts on the level of annual report disclosures.

2.2.1.4 Director Share Ownership

The diffusion of equity and the type of its owners have in the past been used to explain the extent of financial reporting disclosures. A diffuse ownership is thought to help owners to monitor the behaviour of management as predicted by the agency theory (Leftwich et al., 1981, Craswell and Taylor, 1992, McKinnon and Dalimunthe, 1993, Hossain et al., 1994b, Raffournier, 1995) hence there will be greater disclosure within such companies. According to the agency theory it was suggested that there is a separation of ownership and control and conflicts likely to arise as a result of the conflicting interests of these two parties (see for example Jensen and Meckling, 1976, Watts, 1977). Where share ownership is widely held, then the potential for conflicts between the principal and agent is bound to be greater (Fama and Jensen, 1983). The disclosure of information is likely to be greater in widely held firms because in such situations, the principals will monitor their interests in order to ensure that they are optimised and the agents signal this information.

Hossain et al., (1994b) in their study found that ownership structure is significantly associated with the disclosure of information. Chau and Gray (2002b) investigated disclosures by companies in Hong Kong and Singapore. The Hong

Kong Stock Exchange for example requires disclosure of information relating to the number of shares owned by the directors. In the study the ownership variable was calculated by summation of the shares owned by directors and dominant share holders. The coefficients for ownership structure in both Hong Kong and Singapore were found to be positive and significantly influential to information disclosures in both countries for all the information disclosure groups investigated.

In their study, Ruland et al., (1990) measured ownership structure by the proportion of voting stock owned by officers and directors. They then went on to use probit analysis and investigated the probability of whether management making an earnings forecast is explained by analysts' forecast error, absolute analysts' error, firm making a debt or equity offering and ownership structure. Their results showed that firms are less likely to provide management forecasts of earnings as inside ownership increased. This supports the agency theory suggested by Jensen and Meckling (1976) of a corresponding decrease in disclosures when inside ownership increases. Information demand is likely to decline if less people are in control of the company particularly if those individuals are from the supply side of that information. Shareholdings by non-executive directors were posited to be associated with higher monitoring incentives (Shleifer and Vishny, 1986, Jensen, 1993).

Management shareholding has in the past been proven to be positively associated with the amount of information disclosed particularly that to do with earnings (Warfield et al., 1995) where managerial ownership refers to the percentage of ordinary shares held by senior managers including directors. It is suggested that the extent of managers' shareholdings can reduce agency costs as it serves to align the interests of management with those of other shareholders (Jensen and Meckling,

1976). The agency theory hence predicts that there is a positive association between management interests and the level of voluntary disclosure. There is considerably little research that has investigated the impact of director share ownership on disclosures in annual reports and there is need for clarification in this area.

2.2.1.5 Board size

Board size refers to the amount of individuals that are on the board of directors regardless of their roles. There are studies that have analysed the effect on financial reporting relative to the size of the board. A negative relationship between board size and disclosure was observed in a Canadian study by Cornier et al., (2009). In their findings they stated the reason for the relationship was primarily due to the state of the Canadian legal system. The legal protection of investors is higher than most parts of the world by comparison. Cornier (2009) suggests that whenever there are disclosures by any company within the annual report, the information is always perceived as credible. For this reason stakeholders expect to observe a reduction in the agency costs of a declining information asymmetry. They also stated that a reduction on stock market asymmetry is also expected to be a result of increased corporate governance disclosures.

It was suggested that board monitoring increase inversely with the size of the board (John and Senbet, 1998). They however pointed out that this benefit is likely to be countered by the incremental cost of poorer communication and decision making efficiencies associated with large groups (see Lipton and Lorsch, 1992, Jensen, 1993). Cheng and Courtenay (2006) investigated companies that are listed on the Singapore Exchange Limited (SGX) from the year 2000. They found that

there was no relationship between the size of boards and the disclosure scores they measured.

It is difficult to ascertain the general direction of the relationship between board size and the extent of disclosures in financial reporting. There are several studies which have investigated the area and the results have been mixed for example some found a positive relationship between board size and firm performance (Chiang and Lin, 2007, Haniffa and Hudaib, 2006), and some a positive relationship between board size and board monitoring (Anderson et al., 2004, Williams et al., 2005). Other studies established that the size of the board will have an influence on the their ability to monitor and control managers (Lipton and Lorsch, 1992, Jensen, 1993). Although this being the case other studies have observed contrary findings to this notion and suggest that smaller boards are more efficient at performing their duties for example it is easier for a smaller group to reach an agreement on a matter of concern (Lipton and Lorsch, 1992, Jensen, 1993, Beasley, 1996).

2.2.1.6 Audit Committee Size

Audit committees may be viewed as proponents of transparency in disclosures by companies. It may be suggested that audit committees do not only assess the accuracy of disclosures but may also have an influence on clarity in the information that is disseminated by the board of directors. Li et al., (2008a), investigated a sample of one hundred public listed companies and in their analysis found that audit committee size was significantly associated with intellectual capital disclosures.

The Cadbury Report (1992) upholds that audit committees oversee the work of the board of directors as well as the management particularly on matters regarding corporate governance. Their other main role is also that of ensuring financial

reporting is true and fair. Some authors have gone on to explain their roles as monitors of both internal and external auditors of the organisation in the bid to protect the stakeholders of the firm (DeZoort, 1997, Ho and Wong, 2001c). The rationale is that due to all these monitoring processes, the stakeholders of the entity benefit from a reduction in information asymmetry through increased monitoring and disclosures when there is a larger audit committee. This line of thought is supported by previous work which posits that an audit committee's presence does not only result in increased disclosures to the stakeholders but also improves the quality of the disclosures made (Forker, 1992). Forker's (1992) and Ho & Wong's (2001b) results in a Hong Kong study however demonstrated a weak association with the quality of disclosures made.

2.2.2 Company Specific Characteristics

There are a number of studies that have examined the extent and determinants of disclosures over the years (e.g. Copeland and Fredericks, 1968, Belkaoui and Kahl, 1978, Chow and Wong-Boren, 1987, Bradbury, 1991, Chen and Jaggi, 2000, Barako et al., 2006a, Tauringana et al., 2008). Earlier studies mainly investigated the extent of disclosures and whether those disclosures were influenced by company characteristics such as company size, profitability, gearing and industry type among other possibilities.

Previous disclosure studies which investigated the influence of company characteristics, tended to vary in the nature of disclosures being investigated. Some studies have investigated the impact of selected company characteristics on mandatory disclosure (Wallace, 1987, Wallace et al., 1994a, Wallace and Naser, 1995), some on mandatory & voluntary disclosure (Wallace, 1987, Cooke, 1989a),

and some studies were limited to voluntary disclosure alone (Firth, 1979, Chow and Wong-Boren, 1987, Hossain et al., 1995, Tauringana, 1997); others on the extent of segment reporting to firm-specific characteristics, according to a positive accounting approach (e.g. Watts and Zimmerman, 1986, Watts and Zimmerman, 1978). In general, there is prolific research on disclosures but there is little UK based research particularly that to do with private limited companies. Disclosure studies in large tend to entrust their theoretical frameworks in the agency theory and signalling theories. The company specific characteristics that have been selected for investigation as part of this thesis include company size, gearing, profitability, liquidity, multinationality, listing status and multiple listing.

2.2.2.1 Company Size

Company size was the first (e.g. Cerf, 1961, Singhvi and Desai, 1971b, Buzby, 1975) variable found to be significantly associated with disclosure and since then, several other mandatory and voluntary disclosure studies (Buzby, 1975, Cooke, 1989a, Wallace et al., 1994a, Tauringana, 1997, Depoers, 2000, Wong-Boren and Chow, 1987, Meek et al., 1995a, Alvarez, 2011, Domínguez, 2012, Suttipun and Stanton, 2012) have also examined company size. The majority have found the variable to be significantly and positively associated with disclosure levels but some did not find this relationship (Ng, 1985, Davey, 1982, Roberts, 1992).

It will become clear through this literature review that the most popular research on disclosure investigated the influence of company size largely owing to the fact that it was a pioneering area within disclosure studies as mentioned above. Size has been measured using different proxies such as total assets (Cerf, 1961, Singhvi, 1967, Firth, 1979, McNally et al., 1982, McKinnon and Dalimunthe, 1993, Wallace et al., 1994a,

Wallace and Naser, 1995, Hossain et al., 1995, Singhvi and Desai, 1971b, Raffournier, 1995); turnover (Belkaoui and Kahl, 1978, Firth, 1979, Roberts and Gray, 1988, Gray and Roberts, 1989, Wallace et al., 1994a, Raffournier, 1995) and market capitalisation (Nurunnabi and Hossain, 2012, An et al., 2011, Hossain et al., 1994b) among many.

Cerf (1961) pioneered the use of financial reports to investigate disclosures. This method is still in use and is the same adopted by many researchers in the field including this study. In his research, Cerf (1961) investigated 527 firms (258 New York Stock Exchange listed, 156 Over The Counter traded stocks' firms and 113 listed on other stock exchanges). The study made use of regression analysis on 31 weighted items and covered financial reports from the period of July 1956 to June 1957. Cerf (1961) among other variables found that asset size was positively associated with the level of disclosure. Singhvi and Desai (1971b) a decade later found similar results in a study that followed the research design pioneered by Cerf (1961) It may be suggested that legitimacy costs among other reasons here are a valid reason for firms with larger asset values to disclose more information in their annual reports than those with smaller assets values. Larger firms (on the basis of asset size) are likely to have a big following of both individual and institutional investors.

Another argument in support of this finding is that firms with larger asset size are more likely to be of interest to regulatory bodies compared to those with smaller asset size. Regulatory bodies may wish to ensure that the relevant firms' operations are exemplary within the industry within which they operate such that if they are to operate in a non-ethical or non-exemplary fashion the impact will not be disastrous to the particular industry in question. A relevant example is the BP Oil spill of April

2010 in which the American government eventually filed a lawsuit (Swint and Blum, 2010).

Other previous research (Lunt, 1982) divided the sample of companies into two groups according to size, and argued that the differences in disclosure between the two groups suggested that large companies disclose more information than small companies. However, Lunt (1982) did not attempt to assess the significance of these differences. The reason given was that any attempt to assess the significance involved a subjective perception of what was rendered important and secondly that smaller companies may have less information to disclose than larger companies anyway. In support of the argument that smaller companies would disclose less information anyway, it may be suggested that the cost implications to smaller companies for information gathering, printing and publications may otherwise have a severe impact on their expenses and in turn their profit in comparison to larger firms.

Disclosing less information would thus entail significant savings. Although the point raised by Lunt (1982) could be true, the problem could be addressed in part by a scoring procedure that accounts for the applicability of items to particular companies which is demonstrated in later research (Wallace et al., 1994a, Schadewlitz and Blevins, 1998, Ho and Wong, 2001c).

Another UK study (Hussey and Woolfe, 1998) employed the Mann-Whitney test, to determine whether the inclusion of segmental information in corporate reports was associated with company size (measured in terms of total sales) and found a strong association. Larger companies may be linked with increased segmental reporting disclosures for a variety of reasons, one possibility that leads to increased disclosure being where companies operate in various segments/countries/regions. As such these companies will not only be bound by the regulations within which the

company is registered but also with the regulations in which the company operates hence leading to possible increased disclosures and the level of mandatory information required under various laws differing. Large companies in general run complex operations such as producing multiple product combinations and operate over wide geographical expanses including being listed on several stock exchanges and operating as multinationals. This entails that there is also a vast scope of rules and regulations those entities have to adhere to as imposed by legislation within the countries of incorporation. Such entities are therefore obliged to disclose certain information as part of the business review (BR) section in the corporate reports.

Schadewlitz and Blevins (1998) examined the relationship between company size and the extent of disclosure in interim reports of companies listed on the Helsinki Stock Exchange. Using a self-developed disclosure index of 26 information items, they analysed 256 interim reports published by 70 listed companies over the period 1985 to 1993. They employed two regression models to determine whether company size, measured in terms of annual net sales and the number of workers in the firm, is related to interim disclosure levels. Their results indicated that company size (measured in terms of number of workers) was directly related to the extent of disclosure. However, there was no association between company size (measured in terms of annual net sales) and voluntary disclosure.

Bradbury (1991, 1992) did not find an association between company size and the extent of voluntary disclosures. Taking a look at the latter study (Bradbury, 1992), the suggestion was that company size is not a significant determinant of disclosures. Bradbury (1992) investigated disclosures among New Zealand company reports. The sample consisted 172 listed companies that reported semi-annual earnings during the period 1973-76 when the content of interim reports in New

Zealand was unregulated, the researcher (Bradbury, 1992) divided the interim report disclosures into two categories, "quantified" and "non-quantified" disclosures. The author hypothesized that accounting reports are more valuable to investors in smaller firms and therefore smaller firms were more likely to supply accounting reports prior to disclosure laws than larger firms. Bradbury (1991) did not detect any significant differences between small and large companies thus suggesting that company size was not a determinant of interim disclosure extent as opposed to the studies discussed above.

Size measured by market capitalisation is a fairly commonly used proxy (as examplified among others by Chow and Wong-Boren, 1987, Lang and Lundholm, 1993, Hossain et al., 1994b). Most of the above studies purport that this variable is significantly associated with the extent of disclosure as opposed to a few as earlier mentioned. A less popular proxy that has been used before is size measured by number of shareholders (Cerf, 1961, Singhvi, 1968, Singhvi and Desai, 1971b). All three studies found a positive significant association between company size (measured by number of shareholders) and disclosures reported in the annual reports. One may suggest from the finding that companies with larger market capitalisation and a higher number of shareholders are bound to have a larger information following. In other words the demand for information would likely be higher than smaller size companies based on this measure. It would therefore make sense based on this suggestion to propose that such firms are likely to disclose more information in their interim and or annual reports to reduce information asymmetry.

As many have analysed and accepted the association of company size with the extent of disclosures. It is without doubt that some scholars (Watts and Zimmerman, 1978, Hagerman and Zmijewski, 1979, Ball and Foster, 1982, Watts and Zimmerman,

1986) argued against the use of company size despite the manner of measurement. Watts and Zimmerman (1978) argue that firm size has been used as an operationalising variable for several varying hypotheses. Such would include a variation of facets which would potentially affect disclosure levels anyway; examples include (1) management ability & advice, (2) political costs, (3) competitive advantage and (4) information production costs. Ball and Foster (1982) add to this argument suggesting that the wide variation of proxies makes it difficult to determine which of the variables company size is actually estimating as it may not be proved as to whether it is specifically referring to any of 1-4 above or a combination. Hagerman and Zmijewski (1979) argued that the use of company size as a proxy may not adequately capture the impact of political costs. Watts and Zimmerman (1986) somewhat agree with Haggerman and Zmijewski (1979) on the problems associated with using company size as a proxy but on the contrary justify the use of size by suggesting that one may need to use crude measures in the early stages of developing a theory and it may thus be viewed as a composite proxy.

A final point to raise in support of the argument that more research has pointed out that larger companies tend to disclose more information is the notion that the credibility of management disclosures is enhanced by regulators, standard setters, auditors and other capital market intermediaries (Healy and Palepu, 2001). Theory also suggests that auditors enhance the credibility of financial reports but there is very little empirical evidence to substantiate this notion.

Larger companies are subject to stricter disclosure requirements due to pressure from policy makers as the case in the introduction of KPIs disclosure in the BR section of the annual report (Tauringana and Mangena, 2009). Regulators are also concerned about the welfare of the financially unsophisticated investors. Requirements therefore attempt to reduce the information gap between the informed

and the uninformed and the whole pressure being laid on the larger companies who can better afford the burden of increased disclosure costs. Based on the review of literature regarding company size, it can be seen that not all measures of company size demonstrate a positive significant relationship regardless this being the most researched variable in disclosure studies. Stanga (1976) and Wallace (1987) for example did not find size (measured by turnover) to significantly explain the extent of disclosures in financial reports.

2.2.2.2 Gearing

Gearing measures the long term risk implied by a firm's financial structure. It therefore reveals the balance between the funds invested by the shareholders and those invested by lenders. A certain level of gearing may have the effect of raising the shareholders real return on investment and is subsequently attractive to the shareholders. Debt obviously poses a certain level of financial risk hence a high gearing ratio may indicate and unsustainable level of debt (Watson et al., 2002a).

Many studies have analysed the influence of gearing on the levels of disclosure. The results of these studies have been mixed as some found a significant positive relationship with disclosure (Malone et al., 1993, Hossain et al., 1994b, Ahmed and Courtis, 1999); some did not find an association (Chow and Wong-Boren, 1987, Wallace et al., 1994a, Hossain et al., 1995, Raffournier, 1995) while others found a significant negative relationship (Belkaoui and Kahl, 1978). Many researchers in the past such as Fama & Miller (1972) Jensen & Meckling (1976) and Smith & Warner (1979) have postulated that agency costs would normally be higher for those firms possessing a proportionally higher level of debt in their capital structures. They hence suggest that there is a positive association between the firms'

gearing and their extent of financial disclosure. It can be suggested that when there is a higher level of risk associated with a firm then it follows that the stakeholders such as shareholders, lenders and suppliers among others are concerned about the going concern of the entity and as such the firm will offer reassurances to these parties in the form of increased disclosures.

After the study by Jensen and Meckling (1976) on the agency theory, Watts (1977) went on to suggest that the potential wealth transfers from fixed claimants to residual claimants increase as the level of gearing also increases. Debt holders will try to price-protect themselves and in turn shareholders and managers will be incentivised to offer an increased level of monitoring such as through voluntarily disclosing information in interim and annual reports. The agency theory therefore posits that the extent of corporate voluntary disclosure will be an increasing function of leverage.

Most of the identifiable disclosure studies postulate that there is a relationship between gearing and the extent of disclosures (for example Bradbury, 1992, Hossain et al., 1994b, Belkaoui and Kahl, 1978, Ahmed and Courtis, 1999, Ben-Amar and Zeghal, 2011, Dal-Ri Murcia and dos Santos, 2012). It was hypothesized that companies with higher levels of debt financing disclosed more interim report information than companies with lower levels of debt financing (Bradbury, 1991). The results however did not support the hypothesis in the predicted direction. A negative association between interim disclosure and financial leverage was detected, suggesting that companies with higher levels of debt financing disclosed less information than companies with lower levels of debt financing. As opposed to the suggestion above on higher leveraged firms providing reassurances for the future continuance of the company, where the opposite is true may be a result of directors

having little or no confidence in the going concern of the business entity hence deliberately shunning the disclosure of additional information on the position of the firm. In some cases it may be found that the management will not wish to disclose a debt rescue package.

These results find support from later interim disclosure studies that investigated financial leverage (Tan and Tower, 1997, Schadewlitz and Blevins, 1998). In one study for example, Tan and Tower (1997) investigated the determinants of disclosure compliance with interim reporting requirements among Australian and Singaporean companies. They reported that companies with lower levels of debt leverage showed higher levels of disclosure compliance than companies with higher levels of debt in their capital structure. In a Finnish study (Schadewlitz and Blevins, 1998), it was also found that financial leverage was associated with the extent of disclosure in interim reports. Their results clearly indicated that the level of interim disclosure in Finnish interim reports was negatively associated with financial leverage, suggesting that companies with high financial leverage disclosed less information.

On the contrary Craswell and Taylor (1992) purported in their study that gearing significantly explains shifts in the levels of disclosure of reserves by Australian oil and gas companies. Bradbury (1992) also found a significantly positive association between leverage and the extent of voluntary segment disclosure in New Zealand diversified companies. Although studies on balance generally tend to suggest that voluntary disclosures can be expected to increase or decrease with leverage, Chow and Wong-Boren (1987) however found no association of this variable with voluntary disclosures for their sample of Mexican companies and suggest that Mexican companies may use other mechanisms besides voluntary

annual report disclosures for containing shareholder-debt holder-manager interest conflicts (p.540).

The signalling theory suggests a possible link between disclosure and gearing although the direction of the relationship is unclear as witnessed through evidence of mixed results above. Ross (1977) explains increased leverage as a positive signal and an expression of confidence for the future by managers. This notion is an arguable one as the cause for increased leverage is subject to scrutiny, a two way path in which leverage increments may be for example a consequence of insufficient working capital which is not favourable. Myers & Majluf (1984) suggest that an unanticipated increase in leverage may entail that the firm has/had a smaller than expected cash flow hence sends negative signals. On the other hand leverage increments can be the result of equity for further investment which can be a positive factor. It can be seen then, that the theory is inconclusive as to the expected direction of the relationship between gearing and the level of disclosure paralleled with the evidence of inconclusive empirical results.

Further evidence of mixed results includes the work of Belkaoui & Kahl (1978) who showed a negative relationship between financial leverage and disclosure, whereas Chow and Wong-Boren (1987) found that leverage offered no explanation of voluntary disclosure. Gray & Roberts (1989) however, found that company capital structure had a positive and significant impact on voluntary disclosure (at a 5% level) when they used the Mann Whitney test, but not when the Chi squared test was used. Some studies as the above have used more than one method, another example is Hossain et al. (1994b) and Raffournier (1995) who use both a univariate and multivariate frame of analysis. Raffournier (Raffournier, 1995) did not find a significant relationship between company leverage and disclosure in

either analysis. Although Hossain et al. (1994) found a significant association was present using univariate analysis, when multivariate analysis was employed no significant relationship was observed. The next subsection will continue to analyse company specific variables and will particularly investigate previous research on the impact of profitability on the level of disclosures within financial reporting.

2.2.2.3 Profitability

The profitability of a firm may in large demonstrate that firms ability to absorb its running costs hence its success. Singhvi and Desai (1971b) suggested that there are several ways in which profitability may be measured. It goes without mention that the manner in which this measurement is made may have an influence on the results of the influence of the variable on the extent of disclosure. This variable may be measured in a variety of ways such as rate of return on investment or earnings margin (Singhvi and Desai, 1971b). Profit as with gearing has had a lot of researchers investigate its association with the level of disclosure. There have been mixed results in the findings for instance some found a positive association between profit and the extent of disclosure (Singhvi and Desai, 1971b, Wallace et al., 1994a, Yang and Crowther, 2012, Cormier and Gordon, 2001); others found no association (Raffournier, 1995, Inchausti, 1997, Ahmed and Courtis, 1999, Guidry and Patten, 2012) and some postulated that there was a negative relationship between profitability and the extent of disclosure (Belkaoui and Kahl, 1978, Ho and Taylor, 2007, Smith et al., 2007).

The signalling theory suggests that if a company is making a healthy profit and performing well, it would wish to signal their superior performance to financial reporting information users particularly investors. Akerlof (1970) suggested that when companies are performing well they tend to wish to disclose their excellent

performance to their stakeholders. If a company's profit is higher than the industry average, then the management are likely to disclose more information in order to assure its shareholders of their strong financial position (Singhvi and Desai, 1971b, Andrikopoulos and Kriklani, 2012b). The agency theory also suggests a likely association between profitability and disclosure. Inchausti (1997) for example argues that managers of very profitable firms will disclose detailed information in order to support the continuance of their positions and compensation arrangements. Further, it is argued (Ng and Koh, 1994) that more profitable companies will be subject to greater public scrutiny and will therefore apply self-regulation mechanisms such as increased disclosures to try and avoid external regulation.

Schadewlitz and Blevins (1998) postulate that there is a positive relationship between financial report disclosures and profitability; they measured profitability in terms of profit to net sales ratio. However, contrary to their hypothesised direction, they found that company profitability seemed to reduce rather than increase the level of disclosure in reports. They provide two possible reasons for this finding. The first being that managers may believe that the existence of a company's good performance provides an adequate signal of profitability and therefore find it unnecessary to disclose more information. The other reason provided was that growth oriented, firm specific information could be so valuable that the companies are not prepared to disclose it in its reports for fear of attracting new entrants in the industry. This is therefore a measure that may be put in place to protect competitive position.

Beattie & Jones (1992) in their study investigating the use of graphs in financial statements, tested the hypothesis that graphs of key financial variables are more likely to be included in annual reports of companies with `good' rather than

`bad' performance in terms of the variable graphed. They found a significant (at a 1% level) positive relationship between performance as measured by profit before tax, earnings per share, dividend per share and the inclusion of graphs in terms of these variables. Cormier and Gordon (2001) in their study of disclosure practices by multinationals also found that disclosure was significantly associated with profit; this finding is in line with that of Nurunnabi and Hossain (2012). Similarly, Williamson (1984) found that on average the return on sales ratio was significantly higher for disclosing than for non-disclosing companies. Inchausti (1997) however, found no evidence of a relationship between disclosure and profitability in her study of Spanish firms similarly with Guidry and Patten (2012).

Chen et al., (2002) investigated the effect of profitability on managers' motivation to include balance sheet information with quarterly earnings announcements. They found that companies reporting losses were more likely to include balance sheet information which is consistent with some previous studies (e.g. Schadewlitz and Blevins, 1998). Chen et al., (2002) argued that in the presence of a loss, earnings fail in their traditional role as an indicator of future earnings; thus suggesting that loss-making companies would have incentives to provide more information to supplement reported earnings. It is easy to criticise this line of thought simply because the reporting of profits cannot simply be replaced by the reporting of losses in the absence of profits. The implications are very important here and it is difficult to see how they can replace each other. It is within reason to suggest that losses reporting may be positively related to the extent of disclosure on the basis that management of a firm may wish to highlight possible factors such as investments for the future; another possibility could be due to the management disclosing that the losses reported are not as catastrophic as they may appear.

According to Akerlof (1970), there is a cost attached to being perceived as a "lemon". As a result, those well run, profitable firms are incentivised to distinguish themselves from less profitable firms. This process aids in raising capital on the best available terms (Chow and Wong-Boren, 1987, Anderson and Carverhill, 2012). More profitable firms can be expected to disclose more voluntary accounting information (Foster, 1986, Domínguez, 2012). Unfortunately some studies such as McNally et al. (1982) do not find their profitability measure to significantly explain voluntary disclosures by New Zealand companies and do not offer any possible explanations in their study. Guidry and Patten (Guidry and Patten, 2012) also did not find an association between disclosure and profitability.

Akerlof (1970) stated that well-run firms with higher profitability and higher growth rates would want to distinguish itself from the contrary as afore mentioned. Where companies are performing well, then their superiority can be signalled and information asymmetry between investors and managers reduced and agency costs trimmed down through increased disclosure. Akerlof's (1970) argument is easily supported, for example by the study of non-financial companies listed on the Bolsa de Volares de Sao Paulo (BOVESPA), it was found that profitability was positively significantly associated at the 10% level with social and environmental disclosure. However mixed results are prevalent in this area and even within the same country such as the fact that several UK studies (e.g. Spero, 1979, Roberts and Gray, 1988, Gray and Roberts, 1989, Lutfi, 1989, Watson et al., 2002a, Bozzolan et al., 2006, Li et al., 2008b, Li et al., 2012) report mixed results on the association between profitability and disclosure. This is clearly an area of further research until there is some level of correlation among results.

2.2.2.4 Multinationality

Multinationality is a variable that has been investigated in many previous studies (for example Chau and Gray, 2002b, Xiao et al., 2004, Barako et al., 2006b, Gelb et al., 2008, Gray, 1978). Multinationality in this study stems from an aspect of segmental reporting. It refers to companies that have substantial operations outside of Great Britain (GB). There are not many studies that have focused on the extent of disclosures based on the level of substantial operations abroad. In a study by Gray (1978), he found of the largest EEC Multinationals that he investigated, where a company had at least two or three countries in which it operates, 95% of such entities made increased disclosures in the annual report. Majority of such companies, according to Gray (1978); in fact provided an additional segmental reporting section in their annual reports. This finding by Gray (1978) may be supported in part by the legitimacy theory. The theory posits that firms perform certain socially desired actions in return of approval by its stakeholders, this in turn strenghtens the relevant businesses' going concern. The actions taken by the business may be viewed somewhat as a social contract with its stakeholders. Another reason for increased disclosures is due to regulations within the regions of operation. An example is in the United States where Gray (1978) suggests that the problem of limited disclosures was identified and the Financial Accounting Standards Board (FASB) issued a standard that provides for a detailed disclosure framework.

In a more recent study by Nalikka (2008) on companies listed on the Helsinki Stock Exchange. The paper placed focus on the impact of corporate culture on disclosures. The study investigates 135 companies using regression analysis to establish whether there are any relationships between the variables concerned. Nalikka (2008) found that multinationality is positively and significantly associated

with the level of disclosures in annual reports. This result is not unusual because multinational companies are expected to supply increased information as a result of internationalisation of both business and capital markets. Firms operating in several countries are also challenged to meet the information needs of a diverse group of stakeholders including cultural backgrounds. The local community in a company venturing in a new country for example, may wish to make investments. Monitoring costs may increase and subsequently have a direct impact on the agency costs for which the problem may be alleviated by the reduction of information asymmetry through increased disclosures.

On the contrary it may be suggested that operating in other segments will not necessarily entail increased disclosures due to the costs, monetary, physical and intellectual. The costs of segment reporting include some vital logistics such as transfer pricing and segment definition among many. Finally it is important to note that in some cases some companies operate in other countries or segments where regulations and recommendations may be lax such as the UK's Combined Code on Corporate Governance which operates a comply or explain policy rather than punish the offender. In such situations it would be reasonable to expect companies operating in such regions not to provide additional disclosures. There have been mixed results in the past as some found a positive relationship between multinationality and disclosure (e.g. Depoers, 2000, Raffournier, 1995, Cooke, 1992, Nalikka, 2008); some finding no association (e.g. Garcia-Benau and Monterrey-Mayoral, 1992); and Gelb et al. (2008) found a negative relationship.

2.2.2.5 Liquidity

Liquidity measures the ability of a company to pay its debts when they fall due. There are however various methods in which it may be measured which include the current ratio, quick ratio and the operating cash flow ratio. The manner in which this measurement is made as with the profitability measurements may have an influence in the direction of the results. It has been suggested in the past that firms with a high liquidity ratio may wish to make increased disclosure to highlight their soundness (Belkaoui and Kahl, 1978). Akerlof (1970) suggests that well performing firms will wish to signal their performance, in this case performance being a firmly positive cash flow position.

One may suggest that a company with high liquidity will wish to reassure its debtors that they are in a financial healthy position to pay off what they owe when it falls due. Companies with better liquidity positions are more likely to disclose this information. The stakeholder theory which was pioneered by Edward Freeman (1984) also supports this argument through its emphasis on giving regard to the interests of stakeholders, in this case creditors. The stakeholder theory thus posits that information asymmetry may be reduced by increased disclosures and consequently reducing agency costs. It has in the past been suggested that companies in a stronger financial position will tend to disclose more information than weaker companies (Wallace, 1987). Barako et al. (Barako et al., 2006b) extended disclosure research to a developing country. The study examined annual report disclosures by listed companies on the Nairobi Stock Exchange over the period from 1992 to 2001. The results of the 54 companies investigated using multivariate analysis revealed that liquidity did not have a significant influence on the level of disclosures by Kenyan listed companies.

Looking at previous studies, it also seems that previous results on this variable have yielded mixed results in the past. A positive significant association was found to exist between liquidity and the extent of disclosures by Belkaoui and Kahl (1978). Tauringana (1997) points out that where companies are in a low liquidity situation, they my attempt to disclose less information about their situation in a bid to avoid creditors demanding their money for the fear of not getting it at all. Liquidity was however found to have a negative significant relationship with disclosures in other studies (Wallace, 1987, Wallace et al., 1994a). Other identified studies in the area demonstrated that there was no significant relationship with the extent of disclosure (Wallace and Naser, 1995) including Lutfi (1989) in the UK. From the extant, it may be seen that the variable requires further research.

2.2.2.6 Listing Status

Every stock exchange has a list of rules that should be observed by companies requiring to be listed. Such rules as a matter of fact will bind companies to report on certain aspects in their corporate reports which is essentially a form of increased disclosure (Cooke, 1991). Many studies have investigated listing status in the past (Kun et al., 2008, Collett and Hrasky, 2005, García-Meca and Martínez, 2005, Lopes and Rodrigues, 2007, Wang and Claiborne, 2008). Previous literature has suggested that listed companies tend to disclose more information than those that are not listed at all (Chow and Wong-Boren, 1987, Depoers, 2000). Firth (1979) suggests that information disclosure by companies listed on a stock exchange stimulates activity for the company's stocks. It may therefore be worthwhile to disclose enough information to alleviate asymmetry and provide reassurances to stockholders about the stability and the going concern of the company.

Collett and Hrasky (2005) for example investigated disclosures by listed firms in Australia. The study took its sample from the Connect 4 database which list companies on the stock exchange in Australia (ASX). Their sample size was 299 from the year 1994. They used a dichotomous disclosure index to measure disclosures and employed multinomial logistic regression to assess the relationship between listing status and information disclosures. Listing status was found to significantly explain the level of information disclosure, this finding is in line with other prior studies (Eng and Mak, 2003, Meek et al., 1995a, Carson, 1996, Williams, 1999).

Cooke (1989a) argues that monitoring may vary due to listing status, he posits that agents in general have more information than the principals who require the information. Larger shareholder bases of listed companies are likely to be exposed to higher monitoring costs. This situation as afore mentioned can be improved by

increased disclosures. Listing status was found to be significantly associated with the extent of disclosures by several studies (e.g. Singhvi and Desai, 1971b, Cooke, 1989a, Wallace et al., 1994a) including Firth (Firth, 1979) in the UK. Other studies however did not find any significant relationship (e.g. Gray et al., 1995, García-Meca and Martínez, 2005).

2.2.2.7 Multiple Listing Status

Previous studies dating as far back as the 1970s (Singhvi and Desai, 1971b) have found market related variables such as listing status and earnings margin to be associated with the extent of voluntary disclosure in company reports. There are various reasons incentivising managers to voluntarily disclose information, one being to reduce monitoring by outside shareholders particularly where a firm is listed on more than one stock exchange. In the same way it has been suggested that as the managers' share ownership falls, outside shareholders will increase monitoring of managers behaviour (Jensen and Meckling, 1976). Some managers voluntarily disclose information in order to exaggerate their firms' favourable attributes and results. Adversely, voluntary disclosures may be manipulated by some cushioning of the bad attributes of their firms. This is therefore a bid by companies to influence the perceptions of stakeholders of the entities (Bansal and Clelland, 2004) and for these reasons disclose more voluntary information.

The corporate financial reporting literature suggests that several corporate attributes influence the extent to which listed companies comply with mandatory disclosure requirements of the stock exchange on which they are listed (Ahmed and Nicholls, 1994, Wallace and Naser, 1995). Several studies have suggested that listing on multiple stock exchanges will influence increase corporate disclosures

(Cooke, 1989a, Gray et al., 1995a). An argument that may be forwarded for the increase in informational demand is due to broadening of the stakeholder base. Where companies venture into foreign stock exchanges, the reasons are mainly explained through the capital needs theory. A more diverse stockholder base will probably demand more information due to the diversification of investor agendas and limited knowledge about a foreign corporation. Schipper (1981) and Cooke (1989a) suggest that monitoring costs would be higher for firms with multiple listing status and this state might be alleviated by increased information disclosure.

According to Cooke (1989a), companies that are listed in foreign stock exchanges and disclose information generously are likely to attract increased demand for that company's shares. Several other researchers seem to agree that there is a positive association between multiple listing status and the extent of corporate disclosures as any such company with such a status would consequentially be bound by the rules of the different exchanges it is listed on (Choi, 1973, Meek and Gray, 1989, Cooke, 1989a, Cooke, 1991, Cooke, 1992) except for where foreign exchanges have lesser listing rules. The multiple listing variable is once again one that has seemed to yield different results based on the statistical methods implemented for example Cooke, (1989a, 1991), Hossain et al., (1994b), Meek et al., (1995a), Hossain et al., (1995), Depoers, (2000) found a significant association using multivariate analysis but not while using univariate analysis, as in Tauringana's (1997) UK study. Further research will be conducted using regression analysis to investigate whether there are any deviations from previous findings.

2.3 Summary of previous research

Table 2 is a summarised version of the previous studies analysed in the literature review section of this study. Clearly this table does not encompass all the studies that have been undertaken but serves for illustrative rather than exhaustive purposes. The list is therefore indicative of prior work in disclosure studies.

Table 2: Summary of Disclosure Studies Analysed

Researcher/s (Year)	Country	No. of firms	Disclosure items	Variables confirmed	Variables not confirmed
Cerf (1961)	USA	527	31	Size (Assets, Number of Shareholders) Profitability	Listing Status
Singvhi (1967 and 1968)	USA	150	32	Size (total assets), number of shareholders, listing status, auditor firm, rate of return and earnings margin	Financial position of the firm
Singhvi and Desai (1971)	USA	155	34	Asset size, number of stockholders, rate of return, earnings margin, listing status, audit firm size	
Choi (1973)		64	36	Size, industry	
Buzby (1975)	USA	88	39	Size (Assets)	Listing Status
Stanga (1976)	USA	80	79	industry	Size (turnover)

Table 2: Summary of Disclosure Studies Analysed Continued…

Researcher/s (Year)	Country	No. of firms	Disclosure items	Variables confirmed	Variables not confirmed
Belkaoui and Kahl (1978)	Canada	200	30	Size (turnover and assets), Gearing, Profitability, Industry	Net profit/total assets and capitalisation ratios
Gray and Roberts (1989)	UK	212	34	Size (turnover and net tangible assets), and debt to equity ratio	Profit margin, percentage of foreign sales and geographical diversification index
Cooke (1989a)	Sweden	90	224	Size (total assets, turnover, number of shareholders), Quotation status, Industry, Multiple listing	Parent company relationship (Sweden)
Lutfi (1989)	UK			Size (turnover and number of employees, directors' share of equity, share option scheme, gearing and profitability (negative)	
Roberts and Gray (1988)	UK			Size (turnover)	

Table 2: Summary of Disclosure Studies Analysed Continued…

Researcher/s (Year)	Country	No. of firms	Disclosure items	Variables confirmed	Variables not confirmed
Ruland, Tung and George (1990)	USA	146		Proportion of voting stock owned by officers and directors	
Cooke (1991)	Japan	48	106	Size	
Bradbury (1991)	New Zealand	158		Interim dividend, financial leverage, unexpected earnings, size, non-manager shareholding	industry
Diamond and Verrechia (1991)	USA	2 Large institutional traders		Substantial shareholdings by institutional investors	
Bradbury (1992)	New Zealand	172		Industry type and unexpected earnings	Size (market value) and earnings volatility
Cooke (1992)	Japan	35	165	Size, listing status, industry type	
Craswell and Taylor (1992)	Australia	98		Gearing, Auditor identity (high/low quality), Cash flow risk, Size (total assets)	

Table 2: Summary of Disclosure Studies Analysed Continued…

Researcher/s (Year)	Country	No. of firms	Disclosure items	Variables confirmed	Variables not confirmed
Husssey and Wolfe (1994)	UK	223		Company size	Not applicable
Wallace and Naser (1995)	Hong Kong	80	142	Size (total assets and sales), conglomerate, profit margin (negative)	Rate of return, liquidity ratio, financial leverage, size (market capitalisation) and auditor firm
Meek et al. (1995)	US, UK, France, Germany and Holland	226		Size, country of origin, industry, leverage, multinationality (extent of multinational operations), profitability, international listing status	
Hossain, Perera and Rahman (1995)	New Zealand			Size (assets), foreign listing status, leverage	Assets in place and auditor firm
Raffournier (1995)	Switzerland			Size, (total assets and sales), and internationality	Leverage, profitability, ownership structure, auditor size, percentage fixed assets and industry type

Table 2: Summary of Disclosure Studies Analysed Continued…

Researcher/s (Year)	Country	No. of firms	Disclosure items	Variables confirmed	Variables not confirmed
Zarzeski (1996)	France, Germany, Hong Kong, Japan, Norway, UK, US	256	58	Foreign sales, size, gearing, uncertainty avoidance, individualism-collectivism, masculinity-femininity, power distance	
Inchausti (1997)	Spain	138	50		Profitability
Botosan (1997)	US	122		Cost of equity, market beta, market value, analyst following	
Hussey and Woolfe (1998)	UK	138		Company size (total sales)	Industry type
Chen, DeFond, Park (2002)	USA	2551	23086	Volatile stock returns, Profitability	
Chau and Gray (2002)	Hong Kong and Singapore	60 (Hong Kong), 62 (Singapore)	116	Industry, company age, profitability, M&A acquisition transactions, unexpected earnings, volatile stock returns, large forecast errors	none

Table 2: Summary of Disclosure Studies Analysed Continued…

Researcher/s (Year)	Country	No. of firms	Disclosure items	Variables confirmed	Variables not confirmed
Eng and Mak (2003)	Singapore	158	55	Proportion of non-executive directors, Managerial ownership, Significant government ownership	Blockholder ownership
Mangena and Pike (2004)	UK	256	113	Audit committee finance expertise	
Mangena and Pike (2005)	UK	262		Shareholding of audit committee members, audit committee financial expertise, audit committee size, proportion of non-executive directors, institutional shareholdings, auditor involvement, company size, multiple listing, gearing ratio, interim report profit, liquidity ratio, executive director shareholding	
Sletten (2006)	USA		919 announcements of financial restatements	Stock price declines	

Table 2: Summary of Disclosure Studies Analysed Continued…

Researcher/s (Year)	Country	No. of firms	Disclosure items	Variables confirmed	Variables not confirmed
Barako et al., (2006)	Kenya	54	106	Board Composition, Leverage, Proportion of non-executive directors, Presence of an audit committee, Shareholder concentration, Proportion of foreign ownership, Percentage of institutional ownership, Size (total assets), Leverage	Board leadership, external audit, Profitability, Liquidity
Cheng and Courtenay (2006)	Singapore	104	72	Proportion of non-executive directors	Board size, CEO duality
Tauringana and Mangena (2006)	UK	170	46	Size, gearing, profitability, liquidity, exceptional items, directors share ownership, substantial institutional investors, auditor size, non-executive directors	
Beretta and Bozzolan (2008)	Italy	255		Size, gearing, profitability, industry	

Table 2: Summary of Disclosure Studies Analysed Continued…

Researcher/s (Year)	Country	No. of firms	Disclosure items	Variables confirmed	Variables not confirmed
Li et al. (2008)	UK	100		Independent non-executive directors, share concentration, size of audit committee, frequency of audit committee meetings, combined role of CEO and Chairman, length of LSE listing, profitability, firm size	
Tauringana and Mangena (2009)	UK	32	79	Proportion of non-executive directors	
Schleicher and Walker (2010)	UK	502		Profitability, risk	
Kyeyune (2010)	UK	309		Dividend yield, earnings per share, size	
Elzahar and Hussainey (2012)	UK	72		Activity type, firm size, cross listing, profitability, liquidity, gearing, institutional ownership, board size, role duality, board composition, audit committee size	

2.4 Limitations in Disclosure studies

There are limitations that may be identified in disclosure studies and as such have an impact on this research on KPIs disclosure. The threat of litigation costs affects disclosure in two ways, the first being that managers may feel compelled to disclose particularly bad news against their will. Second, litigation can potentially reduce manager incentives to provide forward looking information. Although managers may voluntarily disclose information, the existence of proprietary costs suggests that managers will not disclose all the information in a bid to protect their competitive position. Lack of full disclosure may exist due to agency cost issues (Berger and Hann, 2003). Career concerns and external reputation may lead to exaggerated disclosures. Management may also limit the level of disclosure to avoid follow up questions by analysts.

Political costs as suggested in a study of the economic implications of corporate financial reporting are a significant barrier to voluntary disclosure (Graham et al., 2005). This is where managers limit voluntary disclosures to avoid attention from regulators who may in some cases use such information against them. These reasons for and against voluntarily disclosing information therefore affect the studies of disclosure determinants but on the other hand may be viewed as possible explanations for the error term when regression analysis is manipulated.

It may be suggested that mandatory disclosures help in reducing information gaps between the financially unsophisticated and those who are financially astute as afore mentioned. Voluntary disclosures are still thought to be necessary in order to correct the gaps in the usefulness of disclosures particularly to investors. Due to the suggestion that mandatory disclosures are thought not to be as forthcoming as voluntary disclosures; managers may only disclose information in this category to

satisfice regulation. Another general restriction on research of this nature is that disclosure cannot be reliably measured because companies may use different phraseology yet referring to a similar point.

Since Cerf's (1961) study, researchers have investigated the extent and determinants of several types of disclosures e.g. voluntary (Firth, 1979, Wong-Boren and Chow, 1987, Hossain et al., 1995), mandatory (Wallace, 1987, Wallace et al., 1994a, Wallace and Naser, 1995), intellectual capital (Brennan, 2001, Bukh et al., 2001a, Bukh et al., 2001b, Bozzolan et al., 2003), social and environmental reporting (Freedman and Wasley, 1990, Guthrie and Parker, 1990, Gray et al., 1995a, Gray et al., 1995b) among many. This study will be focusing on KPIs which is inherently another type of disclosure with interest brought about by the Companies Act (CA) 2006 new regulation to report on them for large firms operating in the UK.

Numerous previous types of disclosure studies were analysed in this chapter and an issue that was be highlighted is the consistency or divergence of findings. The mixed results may be viewed as a call for further research. Examples of such occurrences include Cerf (1961), Buzby (1975), Cooke (1991, 1992) and Ahmed & Courtis (1999) who all found that company size for example was significantly associated with the extent of disclosure while Bradbury (1991) found that company size was not significantly related to disclosures by New Zealand companies. Haniffa and Cooke (2002) in their study of culture and corporate governance in Malaysia found assets in place to be significantly and positively related to disclosure but the finding is contrary to what the study results by Hossain et al., (1994b) exhibited, especially noting that the studies were based in the same country.

The final example at this early stage being the studies by Soy (1996) and Hossain et al., (1994b) who all found that there was no relationship between foreign

ownership and voluntary disclosure; Haniffa and Cooke (2002) observed contrary results which exhibited a positive relationship between foreign ownership and voluntary disclosure. Without speculating, the researcher however looks into possible reasons that could have led to some of these inconsistencies that have been observed in the results over the years in disclosure studies. The possible explanations though not exhaustive and definite, aid as pointers to considerations that may be factored in prior to making conclusions in this and further research. There are several reasons that can be suggested to be responsible or contributor to inconsistent results. It has however not been researched whether results would be similar if such things were eliminated for the purpose of asserting credibility of statistical methods employed in disclosure research. Some of the reasons thought to bring about differences in outcomes include:

The statistical methods adapted in certain research may produce inconsistent results if a different method is adapted. Cooke (1989) for example used parametric methods in their study while others such as Buzby (1975) used non-parametric methods for similar studies.

Time factor may be suggested to be a possible explanatory factor to differing results. Certain environmental aspects may change over time, for example manufacturing firms may be pressured into disclosing information that reveal their efforts in reducing their carbon footprint, such may be a KPI. Other factors that change over time include political pressure and cultural values as explained below.

Political motivation was found to possibly explain deviations in the results sets from different studies for Malaysian corporations (Haniffa and Cooke, 2002). In their study they found companies in the construction industry to make the most disclosures. This finding was found to be inconsistent with one that was carried out analysing

disclosures over a period of three years in the same country (Soh, 1996). Political motivation was thought to be the main reason behind the inconsistencies because during the period of the study by Haniffa and Cooke (2002), the nation's mantra was to 'think big', which culminated in the growth of prestigious large projects and particular priority being awarded to the local construction firms.

Cultural differences as suggested by Jaggi (1975) and Gray (1988). They suggest that differing cultures among countries possibly bring about a different manner of responsiveness to disclosure recommendations and policy. There is evidence of differing responses by reporting companies domiciled in different countries.

Measurement methods have often led to differences in results where the researchers measure the same variable using different methods. Examples in disclosure studies include size measured differently such as by the number of shareholders, assets in place and turnover as exhibited in several studies (Cerf, 1961, Cooke, 1989a, Wallace et al., 1994a, Haniffa and Cooke, 2002). Another instance is exemplified by how Singhvi and Desai (1971) measure the Rate of Return by dividing profit before tax by total assets while Wallace (1987) measured the rate of return by dividing profit after tax by capital employed. Haniffa and Cooke (2002) found assets-in-place to be significantly and positively explain disclosure at the 5% level, contrary to the findings of Hossain et al., (1994). The former used market value of assets as their measure of assets-in-place whereas Haniffa and Cook used the book value of assets and possibly resulting in diverging conclusions.

The nature of the disclosures being investigated may influence the results, for example some researchers investigated the impact of certain corporate characteristics on mandatory disclosure, some on both mandatory and voluntary disclosure and others limited themselves to voluntary disclosures alone.

Scoring judgements; it is arguable that some differences may be a result of differences in judgement in the scoring of annual reports. There can be problems in pointing out whether items are relevant to different companies or not. There is also subjectivity as to the level of information that can be disclosed by a company before the researcher regards the item as sufficient to be counted as a disclosure.

Variable secondary attributes may be suggested to contribute to conflicting conclusions, for example where a researcher investigates whether the proportion of shares owned by top ten shareholders influences the level of disclosure. A secondary trait such as whether the top ten shareholders are local or foreign investors will have implications on the disclosure quality and quantity. Haniffa and Cooke (2002) found that the proportion of shares held by the top ten shareholders was positively related to disclosure. This finding again contradicts the findings of Hossain et al., (1994), who found a significant negative relationship for Malay listed companies. It is possible that the mix of top ten shareholders would effectively have an impact on the level of disclosure of information.

The Industry/Sector may play a part in the outcome of study results. Certain industries bear policies that influence the reporting practices for example KPI disclosures in the UK construction industry and disclosures in the UK banking industry are governed by industry specific policies. In conclusion the problem of inconsistent results is documented or rather acknowledged in most disclosure studies. There is a strong possibility the above mentioned factors jointly or severally assist in explaining the diverging outcomes of studies. Wallace et al., (1994a) lend their support to the argument posited in this thesis that different features in research such as sample size, firm type, characteristics examined, measurement of disclosure indexes and

different statistical methods employed among other reason play a significant influence to arriving at different conclusions in different studies.

2.5 Summary and Conclusion

The main thrust of the chapter was to review some of the existing research in disclosure studies in the UK and abroad. Focus was placed on the impact of company characteristics and corporate governance mechanisms to gain deep understanding of the variables as per extant research. The studies reviewed include research conducted in the UK and abroad.

Company size was found to bear the most consistent results as a variable under scrutiny. The majority of the variables evaluated based on past research produced mixed results. Company size is thought to have consistent findings due to its use as an operationalising variable for several hypotheses including information production costs, management ability, political costs, advice and competitive advantage. It can however be argued that it is difficult to identify which of the above factor/s is responsible for the measure. Having assessed the mixed results for the other variables reviewed, it may be suggested that this swaying of conclusions may have been influenced by one or joint/several factors such as cultural differences, time factor, the nature of the information being investigated, variable measurement methods, scoring methods and procedures and differences in the statistical methods employed among many possibilities. Another observed general restriction on research of this nature was that disclosure could not be reliably measured because companies used different phraseology yet referring to a similar point.

It may be argued that there are several reasons for studying the impact of company characteristics, corporate governance mechanisms, market related variables

and ownership on disclosure of KPIs in the UK. There is only one identified study (Tauringana and Mangena, 2009) that statistically investigates the variables influencing the reporting of KPIs. This study is limited to the media industry hence it may not be reflective of the general KPI reporting trends of UK companies. Secondly the sample of companies under investigation is limited to 32 firms which may not be sufficient to be used in interpolating general KPI reporting practices. Although the analysis is over four years a larger sample could have yielded different results.

As suggested by Tauringana and Mangena (2009), an area of further research would be to extend this research into other industries and make use of larger samples as will be done in this particular research. PricewaterhouseCoopers (2006) suggest that KPIs are more likely to be company and sector specific, but it is important to have a general picture of the reporting trends across different industries for the purpose of policy implications. It is also important to study further on the influence of certain variables on disclosure in the UK because the few existing local studies produced mixed results, for example the association of profitability and gearing with the extent of disclosure. There is a knowledge gap for which further information will be potentially added through this research, for example on (1) the nature of KPI disclosures by UK public listed and private limited companies, (2) the influence of company specific characteristic variables on KPI disclosures, (3) the impact of certain corporate governance mechanisms on KPIs disclosures in annual reports among many.

Chapter 3

Annual Report Users and their Information Needs

3 Annual Report Users and their Information Needs

3.1 Introduction

This study on key performance indicators (KPIs) analyses several variables and how those variables affect the disclosure of KPIs in the annual report. The information that will be used in the analysis for this study will be derived from annual reports. It is therefore important to analyse what the annual report is, who its users are and how useful it is to the identified stakeholder groups. This chapter specifically discusses literature on the users of annual reports and their information needs. This chapter will also assess whether there are any distinctive differences between the information needs of users of private and public company information.

It may be suggested that the information needs of annual report users are not independent; in the majority of cases, there are inter linkages between the needs of various user groups of the annual report and this issue is discussed in detail. This chapter also contains a section that is dedicated to the reporting framework of KPIs and the IASB framework for the preparation of financial statements which are all disclosures that are found in annual reports but have important generic guidelines in order to make information useful to various users. In this section, the researcher will look to assess how the reporting of KPIs links with the general reporting framework of financial information in the annual report.

The chapter is organised as follows: This first section discusses the aims of financial reporting. That section is followed by 3.2 on the stakeholders of the annual report. Section 3.3 and 3.4 discuss the research techniques used for user need research and the information needs of those users respectively. Section 3.6 looks at whether there are similarities and differences between the information needs of different users

specifically the users of private and public listed companies. The study also assesses previous research on the usefulness of annual reports in section 3.7. Section 3.8 explores the reporting frameworks of KPIs and financial information in annual report followed by a summary and conclusion in section 3.9.

3.2 The Aims of Financial Reporting and Trends Based on Jurisdiction

Work on financial reporting and its objectives dates back to the 1930s. A vast majority of these early studies were based in America, for instance the American Accounting Association argued in 1936 that financial statements describe the utilisation of economic resources within an enterprise. They also suggested that financial statements express the balance sheet's position of the entity in relation to its creditors and investors. The aims of financial reporting have always been a contentious area and are reviewed regularly in a bid to equate the balance between the demand and supply of financial reporting information.

An example of such a scenario was the joint meeting in 2005 between the International Accounting Standards Board (IASB) and the Financial Accounting Standards Board (FASB); this was prior to the requirement to report KPIs in the annual report. In the meeting (I.A.S.B and F.A.S.B, 2005), they tried to answer some key questions including which user groups should be targeted by financial reporting, whether financial reporting should look into the future or just present historical information about previous trading periods, should financial reporting include environmental & social information and what the role of the balance sheet among many. The most recent of these major scenarios is the IASB's approval of the

Conceptual Framework (the IFRS framework) for Financial Reporting (2010); this will be discussed in detail further in the chapter.

Going back in time, financial statements have also been referred to as useful in the provision of information that aids in approximating the potential for a business entity to earn money (A.I.C.P.A., 1970). Later in 1973, the Trueblood Report which was a report compiled by a study group of public accountants from the American Institute of Certified Public Accountants (AICPA) concluded that the primary objectives of financial statements were to provide investors and creditors with information that equips them for making economic decisions. These decisions were thought to cover important matters such as comparisons, predictions and identifying potential cash flows. This conclusion which is found in Chapter 11 of the report is reiterated in the Statement of Basic Accounting Theory (A.A.A., 1977). The main objective of corporate reports is to disseminate information about the resources and the performance of the reporting firm (1975). They also assert that financial reporting assigns economic measurements to these resources and performance. The information should however be availed to individuals possessing reasonable rights to it. An updated and more widely accepted definition of the objectives of financial reporting is as reported by the (A.S.B., 1991) that "the objective of financial statements is to provide information about the financial position, performance and financial adaptability of an enterprise that is useful to a wide range of users in making economic decisions".

The objective of financial statements according to the International Accounting Standards Board (IASB) is to “provide information about the financial position, performance and changes in the financial position of an entity that is useful to a wide range of users in making economic decisions” (I.A.S.C., 1989, praragraph

12)[4]. It must however be noted that although the IASB has this clear objective, some regulators do not necessarily follow suit because other factors come into play, hence standard setting is not always standard and neither is it always clear. Examples of factors that come into play include the nature of the industry in which the reporting company operates. In the UK for example, firms within the financial industry operate under specific sets of rules for disclosure purposes, these may not apply to a firm operating in the media industry for instance. The main argument from the researcher's point of view is that the IASB's view on what the objectives of financial statements are determines the regulatory framework for financial reporting in the long term.

Regulators often try to set standards that enhance the economy and do not stifle business activity. It is worth considering too that although the objectives according to the IASB for example seem simple, the standard setting process is a complex task that often has its pros and cons. Standards are normally set within a framework that looks at both the quantitative and qualitative characteristics and this aspect is discussed in detailed in the section about KPIs and the qualitative characteristics of annual reports below.

Financial rules are constantly changing at different rates in different jurisdictions. It is generally all for the betterment of the financial reporting system in meeting its reporting objectives and satisfying the information needs of financial reporting information users. Some problems are however met when firstly some jurisdictions are resistant to the changes in rules/regulations/accounting standards. Some countries have had a very stable financial reporting framework and are

[4]The statement however adopted by the IASB in 2001, was originally printed as part of the Framework for the Preparation and Presentation of Financial Statements (1989).

reluctant to adopting the International Financial Reporting Standards (IFRS) for example, in European nations where some rules have not changed in over 20 years. Other countries such as the USA on the other hand, are very adaptable to change because the financial reporting environment is constantly facing changes and improvements in their financial reporting framework where some standards seem to change every year. Secondly different countries and/or industries have objectives that may be conflicting to another hence offer resistance to adapt to international standards. Financial reporting therefore aims to meet the information needs of different users using considered judgments based on the jurisdictions. KPIs are a fairly new requirement and offer information to users from the management's point of view. Below are a series of examples in different regions highlighting how different cultures and jurisdictions may have implications to the objectives of financial reporting.

The majority of financial reporting rules in *Switzerland* for example are concerned with the objective of stable taxes and a stable economy. The tax rules according to the Canton of Geneva allow for one third of the year end stock to be written off regardless of condition. The effect is a reduction in the book value of assets and the profits. The Swiss code[5] and regulators take the view that companies should be undervalued during periods of economic boom through the creation of hidden reserves. Such can then be utilised during economic downturn and cushion the disruption within the business environment. Regulators in Switzerland argue that this approach is prudent and protects stockholders despite the fact that the methods clearly do not reflect the true economic state of the reporting entity. Having

[5] The Swiss Commercial Code (*code des obligations*)

discussed the Swiss situation which has been in situ for a very long period of time, it is apparent that adopting IFRSs would be problematic. Some companies however have moderately adopted the IFRSs as markets require accurate information that paints a true and fair picture of the economic state of the business entity. An example of a Swiss firm that has adopted IFRSs is Nestle amongst several others.

The Swiss regulator places very little emphasis on information for capital markets in the construction of the financial reporting framework. On the opposite end of the spectrum, the *American* system[6] appears to pay particular attention to financial markets information. Two main bodies in operation in the USA include the Securities and Exchange Commission (SEC) for capital markets information and the Financial Accounting Standards Board (FASB) for standard setting. Their joint information has the main objective similar to the ASB in the UK of providing information users with a platform from which to make investment decisions. The focus according to the above is on public companies and it follows that the rules are not mandatory for private limited companies.

In contrast to the Swiss and the American systems described above; the French systems places overall focus on combining the interests of different user groups in its standards setting process. According to Horau (1995), under the *Comité de réglementation comptable* (Accounting Regulatory Committee); the standard setting process in France is founded on a multi-disciplinary cooperation that seeks to satisfy the needs of a mix of financial information users. Horau (1995) also states that "French standard setting tries without always succeeding, to satisfy a number of unspecified or vaguely known needs of users who are never explicitly recognized".

[6] US Generally Accepted Accounting Principles (US GAAP)

Although international standard setting aims at standardising regulations, it is important to consider that cultural values and traditions within the business world affect financial reporting.

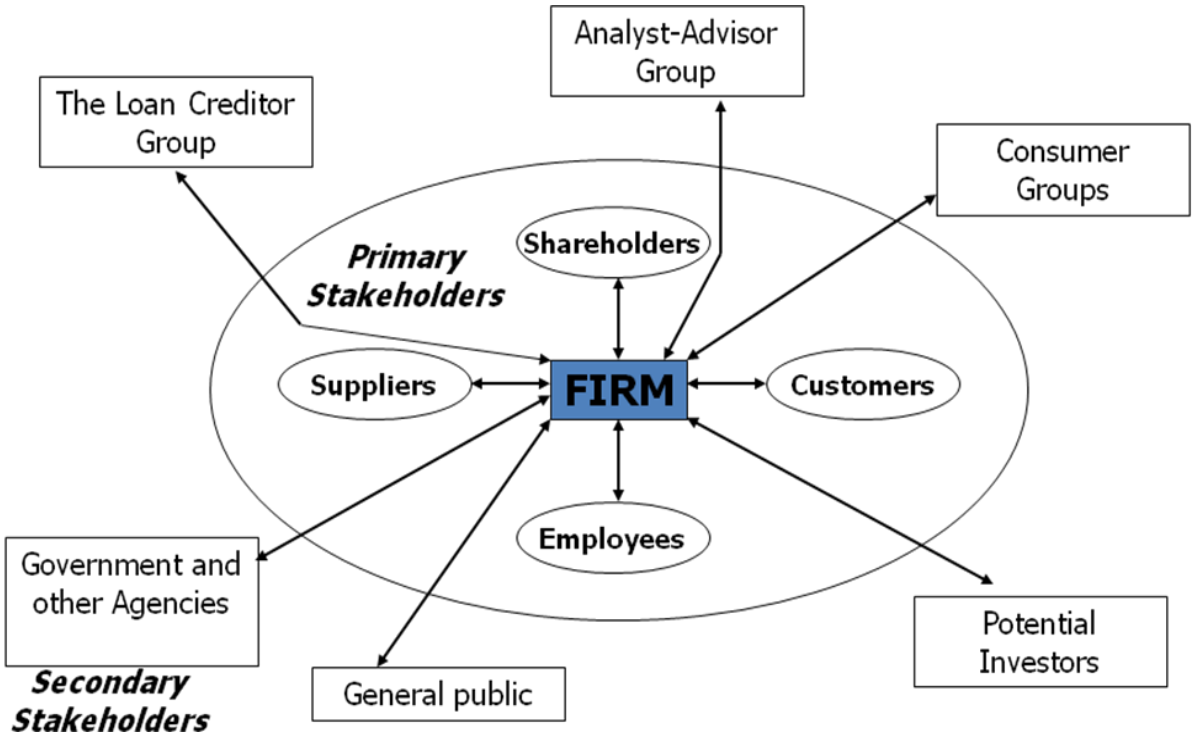
Based on the general trends of defining the aims of financial reporting, one may however reach reasonable conclusions on the matter. The generalised line of thought omnipresent is that financial reporting endeavours to satisfy users' of financial reporting with material data that aids them in their decision making despite inclinations to other agendas such as taxing and economic stability in some jurisdictions. An issue that may require further clarification is thus the identification of the users of financial reporting information. The Corporate Report (1991) and the ASB (1991) identify seven user groups of financial reporting information while the AICPA (1970) and AAA (1977) only identify two groups. This difference leads to a more widespread acceptance of the later models of defining user groups of financial reporting information.

3.3 Users of the Annual Report

Some earlier studies as mentioned above have suggested that the only stakeholders of the annual report are creditors and investors. It is however difficult to take that viewpoint nowadays due to the interests that certain members/groups of the public have on company information. Part of this is due to the wider implications that company actions have on their day to day lives. Such implications may include items such as pollution, employments prospects, local development and philanthropic activities. This researcher does however agree that investors and creditors are the foremost users of annual report information. Later studies however identify up to seven user groups of financial reporting information (e.g. Stone, 1967, Zoysa and Rudkin, 2010, Beattie and Pratt, 2002). The stakeholders of any given company are those

entities that affect or are affected by the activities of either party (I.F.R.S., 2010). The researcher suggests that if a map of possible stakeholders of the annual report were to be drawn out according to the IFRS definition, it would look something like the illustration below (not all possibilities are accounted for).

Figure 1: Generic Map of Stakeholders of the Annual Report



The groups or individuals above have different levels of interaction/affiliation with the business entity. As a result of these differences it can be argued that their level of interest in information disclosed by the business entity varies. Secondly, the nature of the information that they may seek to be disclosed by the reporting entity will also be different. It is important to note that although companies do not have a legal requirement to report to each and every stakeholder possible; it has a moral obligation to the stakeholders of the business entity. With that point in context, according to the

Corporate report (A.S.B., 1991); users of annual reports are those individuals or groups that have a reasonable right to information about a company.

The phrase above, "a reasonable right," simply refers to individuals or groups that fall into the company stakeholder category. The phrase also means that the disclosure of any such information that may be of use to stakeholders should be cost effective and not threaten the competitive position of the reporting entity. The seven groups identified by The Corporate Report (A.S.B., 1991) as having a reasonable right to information include equity investors, loan creditors, employees, analyst-advisers, business contacts, government and the public. Table 3 illustrates the user groups of company information as suggested by different authors.

Table 3: Users of Annual Reports as Suggested by Four Reports

The Corporate Report (1975)	**Making Corporate Reports Valuable (1988)**
The equity investor group	The equity investor group
The loan creditor group	The loan creditor group
The employee group	The employee group
The analyst-advisor group	The business contact group
The business contact group	
The government	
The public	
Accounting Standards Board (1991)	**IFRS Framework (2010) – only identifies primary users**
Present and potential investors	Present and potential investors
Employees	Lenders
Lenders	Creditors
Suppliers and creditors	
Customers	
Government and other agencies	
Public	

Although company reports are normally directed to the shareholders of the reporting entity, it is clear that more than just the shareholders alone are affected by the

activities of a reporting entity. Lee (1982) therefore suggests that more groups would be interested in annual report information.

Throughout the years, companies have provided information to those individuals or groups who provide financial investment. The nature of the information provided to these investors has changed over the years depending on the nature of the financial investment provider for example banks, lenders, and shareholders. Gray et al. (1989) suggest that reporting entities also have an obligation to reporting to the wider public who may have some form of affiliation with the business either directly or indirectly. Such a wider audience is thought to include employees, trade unions, consumers, government agencies and the general public among others.

Gray et al. (1989) suggest about five reasons that warrant the need for information to be directed at a wider audience other than providers of financial investment alone. Some of the reasons they suggested include pressures from trade unions particularly in developed countries having an impact on the information demanded from reporting entities. Secondly Gray et al. (1989) recognise an increase in "challenges to authority." They argue that individuals or groups who are affected by certain institutional decisions have fought for a right to influence those decisions before they are made. Third, there has been a post-war swing particularly in the UK and USA from governments to implement Keynesian-type economics that promote lesser regulation in the pursuit of private gains which would maximise the welfare of the society. Dwelling on the same point, there has been a lot of concern over the gap between private gains and social gains especially in the case of negative externalities such as pollution. Finally, some corporations exert influences on macro-economic variables, social and national economic policies due their sheer size and industry concentration. This leads to greater concern in the demand for information.

In a report entitled Making Corporate Reports Valuable (I.F.R.S., 2010), it was suggested that there are only four users of the annual report namely employees, business contacts, equity investors and loan creditors. The ICAS Report, (2010) deliberately leaves out analyst- advisors, the government and the public at large. They suggest that these groups are not primary stakeholders of information in the reporting entity which is in contrast to the Corporate Report (A.S.B., 1991) suggestions. The ICAS Report (2010) places an argument that the analyst-advisor group use annual report information but they only do so in fulfilling their role as agents and not the end consumers of the information themselves. The ICAS Report (2010) also goes on to argue that the specific information needs of the government and those of the public are not a priority unless it is in relation to their capacity as potential investors, loan creditors and/or business contacts.

Consistent with the ICAS Report (2010); IFRS (2010) also suggest that the primary users of general purpose financial reporting are present and potential investors, lenders and other creditors. They suggest that these groups use such information for deciding on buying, selling or holding equity or debt instruments and providing or settling loans or other forms of credit. IFRS (2010) go on to explain that primary users of annual reports use report information to assess the effectiveness and efficiency of the current management (stewardship) at the reporting entity. Section F 0B6 of the IFRS (2010) report acknowledges that annual reports do not always contain all the information necessary for stakeholders to make economic decisions and suggest that they would need to consider pertinent information from alternative sources too. Although the Framework notes mention that other parties such as prudential and market regulators may find annual reports useful. They assert that both the objectives of general financial reporting and regulation may not be

consistent. For that reason they suggest that annual reports are not directed to regulators or other parties (I.F.R.S., 2010, F OB10 and F BC1.20-BC 1.23).

Looking back at ICAS Report (2010) it can be seen that of the reasons provided for their arguments, it was stated that the government as a legislative authority can mandate the disclosure of specific information that they would solely be interested in. The information needs of the general public according to ICAS (2010) were found to be encapsulated in the information requirements by loan creditors, equity investors, employees and business contacts. None of the information embedded in annual reports was found to specifically address the needs of the general public alone. Further to public information, the ICAS Report (2010) suggests that the information needs of the public should be taken care of by the government as it stands to represent the people. Blake (1978) takes the view that is more aligned with the stakeholder definition; he argues that anyone with an affiliation with the reporting entity in terms of both interests and activities is a potential user of annual reports. Blake (1978) therefore suggests that that further to the seven users identified by The Corporate Report (A.S.B., 1991); competitors, non-executive directors, regulatory bodies, researchers and journalists are also annual report stakeholders.

Gray and Roberts (1989) investigated the influence of fourteen user groups on the extent of voluntary disclosures by companies through the eyes of UK finance directors. The study made use of a questionnaire sent out to the directors. Gray and Roberts (1989) reported that the respondents ranked the groups to be of influential importance in the following ascending order; financial press, private investors, potential investors, institutional investors and financial analysts. These were deemed to have an above average influence on the material voluntarily disclosed by reporting entities.

Gray and Roberts (1989) reported that those with the least influence on the information voluntarily disclosed by companies scored less than 3 points on a 5 point likert scale according to UK finance directors. Examples of such entities included employees, bankers, general public, creditors, consumer groups, domestic government agencies, foreign government agencies, domestic taxation authorities and foreign tax authorities. The research by Gray and Roberts (1989) was based on listed companies alone so it is reasonable to see why they preferred to provide more voluntary reports to financial analysts and institutional investors. Table 4 illustrates their findings.

Table 4: The Influences of User Groups on Information Disclosure

Rank		Mean (n = 116)	Coefficient of Variation (%)	Wilcoxon test prob.
1	**Financial Analysts**	4.86	27	0.4662
2	**Institutional Investors**	4.78	27	0.0000**
3	**Potential Investors**	4.24	35	0.2675
4	**Private Investors**	4.12	31	0.8697
5	**The Financial Press**	4.05	34	0.4378
6	**Employees**	2.93	35	0.1757
7	**Bankers**	2.71	43	0.0000**
8	**General Public**	1.84	48	0.0429**
9	**Creditors**	1.58	47	0.8109
9	**Consumer Groups**	1.58	56	0.5521
11	**Domestic Government Agencies**	1.51	52	0.5014
12	**Foreign Government Agencies**	1.46	59	0.4342
13	**Domestic Taxation Authorities**	1.39	57	0.1614
14	**Foreign taxation Authorities**	1.33	55	

*Range = 1-5; 1= no influence 5= large influence = significant at 5% level

(Adapted from Gray and Roberts, 1989, Table 7.3)

Tauringana (1997) suggests that private investors may have been ranked behind financial analysts, institutional and potential investors by the respondents in the study

by Gray and Roberts (1989) because private investors may be too diffuse to have any influence (as a user group) on the information disclosed in annual reports. The study however points out that there are several user groups of the annual report and it is difficult to pin it down to just a few distinct groups of users. The next section will investigate the different information needs sought by different users of the annual report.

3.4 Research Techniques for User Needs Research

There are several methods that are used to investigate a wide range of issues relating to what users of financial information statements look out for. Beattie and Pratt (2002) suggest that the various issues investigated include matters such as what the preferred information items by users are, what information users utilise to make their decisions, how the information is related to decision performance and what information items appear to have value-relevance based on its impact on company value.

Based on previous studies one can conclude that different methods of investigation are used in these types of studies. Information preference investigations are normally conducted through questionnaires. Decision performance matters and known preferences are usually further investigated using three main methods (Beattie and Pratt, 2002). Firstly, through analysis of content analysts' reports (Previts et al., 1994, Rogers and Grant, 1997, Breton and Taffler, 2001). Secondly, through the documentation of actual decision processes via verbal protocol analysis (Biggs, 1984, Day, 1986b), participant observation (Gniewosz, 1990, Barker, 1998b) and retinal imaging (McEwen and Hunton, 1999). Finally, experimental studies based on case studies (Mear and Firth, 1987).

3.5 Information Needs of the Annual Report Stakeholders

Different user groups of company information will have different needs based on their relationship with the company. This will also determine the quantity and frequency of the information disclosure they require from the reporting entity. The American Accounting Association (1973) argues that potential and current investors for example, use information disclosed by companies in deciding whether to go long or short on the reporting entities equity stocks. In The Corporate Report (1991, p.22), it is also suggested that equity investors will wish to use disclosed information to look into the future and make decisions with regards the likely movements of share prices and future dividends, they will also use the information to make judgments on managements' efficiency in running their company. Based on the above it may be seen that the common information factors of concern to information users regard the reporting company's current financial position, future prospects and management performance.

According to AAA (1973), when companies are preparing their annual report, they need to put credit lines into consideration. The company needs to consider what kind of credit it may seek while on the other hand credit grantors need to make decisions on whether it is worthwhile and safe to offer credit to the reporting entity. Credit grantors will therefore assess what security measures are in place to ensure that they get a reasonable return for their lending risk. In cases where credit has already been granted, creditors will need to assess whether to call up full payment on maturity of the credit deal or whether to increase or decrease the lending commitment.

Prospective creditors to the reporting entity will also need to make an assessment on whether the ambitions of the company they wish to lend are congruent with the creditors'. Stability and growth prospects are also taken into account among

other considerations which may be creditor/firm specific depending on the nature of the industry that the reporting entity operates within. The perceptions of the prospective creditors on the company's image are also important. Employees are another user group interested in the stability of their employer. They will possibly look to find out whether there are any growth prospects for the company and whether there is a possibility of entitlement to bonuses and other pecuniary benefits that come with a stable and expanding firm.

The majority of the individuals and groups discussed so far in this section have a direct personal or financial association with reporting entity. External stakeholders may also require information from the company but will not necessarily be directly related to the activities of the organisation in question. Company information is required by the government and many policy formulating bodies. This information may be required for statistical purposes and may be very useful in policy formulation which in turn affects not only the companies that report the information but other stakeholder groups such as employees and the general public. Trade Unions represent employees and may find information reported in annual reports very useful in the formulation of policies that affect employees. They may also require certain information for monitoring purposes and transmitting statistics to their members.

Customers and trade debtors are external stakeholders of the annual report and are concerned about certain aspects of company information reported in their annual reports. Examples of such instances are where customers wish to have the reassurance that the reporting entity has the ability to produce a product of an assured quality at an economic price. Customers also wish reassurance of the going concern of companies, for example in the tourist industry where holidays may be bought in advance, company stability issues are thus of grave concern. On the other hand The Corporate Report

(1991, p. 25-26) states that "members of the community may wish to know about the role of economic entities as employers, contributions to political organisations, pressure groups and charities...expenditure affecting society and the environment".

From the outlook it seems that different users have different information needs from reporting entities. At the same time it may be argued that there are bands of similar information that are disclosed by companies and all users groups are catered for within those bands, for instance in cases where the government is a representative of the general public therefore the band of information disclosed to the government would also cater for public needs. There is however a case for both sides of the story as one may suggest that each individual information user group may require a specific aspect of information in a specific context to satisfy their information needs. Since there are different user groups, different information needs and different relationships between information users and the reporting entities, it will be necessary to take a closer look at the similarities and differences in information needs. The discussion of similarities and differences will assist in assessing what kind of information companies need to be disclosing in order to meet the needs of their various information users.

3.6 Do Private Company Financial Statement Users Have Different Information Needs?

In a recent report (FAFBT., 2012); the Financial Accounting Foundation Board of Trustees (FAFBT) voted to establish the Private Company Council (PCC). This is a move which is the first of many steps in developing a reporting framework that targets private companies. The PCC under the proposals would work with the FASB in putting together a structure that facilitates GAAP modifications for privately owned companies. This move is in response to the notion that there are

likely to be different information needs between the financial statement users of private and public listed companies. A fundamental question that still requires being addressed through research is whether the information needs of these different users are actually different. The Blue Ribbon Panel (BRP) report (p. 8) on standard setting for private companies, once again suggests that users of private company information and those of public company information have different needs. Clear distinctions of these needs are however not delineated and difficult to justify from an economic theory point of view (Rees, 2012, AICPA., 2005). Some users of financial statements of private companies however concede that there might be to a certain extent, a redressing of the cost benefit equation.

From the earlier discussions it can be summarised that one of the core objective of financial reporting is the provision of information relating to cash flows. This may include details such as the timing of these cash flows, their amounts and probability of future inflows. Such information is important to capital providers in the case of public listed companies and important to lenders in the case of private limited companies. The main contribution of the FASB in these changes thus relate to the creation of financial reporting standards that provide the different financial statement users with information relating to future cash flows depending on whether they are a capital provider or a lender. It can be seen from the arguments that there is little to distinguish between the information needs of both sets of financial statement users (see for example Rees, 2012).

Further to the argument that there are minimal differences in the information needs; the Financial Executives Research Foundation (FERF) issued a report entitled, "*What do users of private company financial statements want?"* (Sinnett and Graziano, 2006). The report produced by Sinnet and Graziano (2006) highlighted

that users such as lenders, investment bankers and investors all required financial statements that are GAAP audited. Private annual company financial report users however require more information than what is currently provided by private limited companies regarding the assessment of future cash flows. Although private company information users require more information, they do not require different information to the users of financial statements from public listed companies.

According to the FERF report of 2006, it may be concluded that private company financial statements prepared in accordance with GAAP are of high value even when a comparison is made with the costs of preparing the financial statements. The results of the survey also indicated that private company reports were of medium to moderately high value but did not request respondents to provide any feedback regarding the value of public listed company statements thus a direct comparison difficult to make. The main difference to be drawn is the fact that some of GAAP requirements are of little importance/relevance to private companies. Based on the results of the survey, the possibility that the respondents have a low opinion of GAAP cannot be ruled out. Secondly Rees (2012) suggests that the survey by (Sinnett and Graziano, 2006) might simply highlight the hardships[7] faced by smaller companies in meeting GAAP requirements in comparison to public listed companies while failing to address the question of differences in the information needs by users of private and public company statements. Based on the evidence there are no significant differences in the information required by the two groups of users; perhaps the main differences only lie in the value placed on the various information items by the respective groups of users.

[7] Due to limited resources

3.7 Empirical Evidence on the Usefulness of Annual Reports

There are several studies that have investigated how useful the annual report is particularly as a vehicle for discharging accountability (Boyne and Law, 1991, Chang et al., 1983). Many authors have stated that the annual report is of most importance in terms of disseminating company information. Marston and Shrives (1991a) for example concluded that the annual report is the most comprehensive document available to the public and is therefore the "main disclosure vehicle". Trayer and Warren (2005) posited that the annual report is the most important complete source of information available for details relating to companies. Parker (1992) indicated that the annual report is of great importance and is a mass communication medium while Anderson and Epstein (1995) confirmed that the corporate annual report could make a major contribution to improved corporate communications, corporate accountability, and corporate governance. Despite this huge approval from some researchers, some have questioned the quality and usefulness of annual report disclosures and some of these studies are discussed below.

3.7.1 Survey of Corporate Bodies and Financial Analysts

Previous surveys of financial analysts and corporate bodies have attempted to understand how scrupulously these information user groups read financial statements, what sources they use for investment decisions, how the investment decision process works and how well they understand accounting terminology. Although stockbrokers and institutional investor make use of a wide variety of sources for obtaining financial information from reporting entities, the majority of their information is derived from interim and annual reports (Lee and Tweedie, 1981). Lee and Tweedie, (1981) also

suggest in their study that issues concerning specific reporting practices such as valuations were more understood compared to matters of principle.

Mason (1971) conducted interviews on 24 investing institutions and 18 stockbrokers in the UK. The aim of the research was to find out their sources of information in order to make investment decisions. The results of the research revealed that annual reports were rated very lowly by investment institutions as sources of information while stockbrokers and statistical cards were rated highly as sources of information. On the other hand, the stockbrokers themselves rated personal contacts as the most important source of information then followed by company reports. Annual and interim reports were also found to be the most widely used sources of information by stockbrokers in Victoria, Australia (Clift, 1973).

Protocol analysis was used by Day (1986a) to arrive at an understanding of the methods used by investment analysts in their decision making. Protocol analysis was conducted by presenting problems to the subjects of the study and requesting them to think aloud thereby allowing the researcher to record the procedure steps taken. Observation continued until the problem was solved. In the protocol analysis method, further questions were asked to the subjects of the experiment to clear up any aspects or issues that needed clarification. Day (1986a) observed that there was need for more detailed interim information including balances sheet figures. He also identified that there was a lack of hard forward looking information in the chairman's report. According to Day (1986a), reporting practice has some fundamental shortcomings that need attention.

21 investment analysts and 12 institutional investors were investigated by Bence et al., (1995). The results of the study highlighted that investment analysts ranked annual reports fifth after preliminary announcements, personal interviews, interim

statements, and company presentations. The institutional investor results revealed that they valued annual reports and personal interviews as the joint most important sources of information. In a similar type of research in the UK, Barker (1998a) found that annual reports and accounts ranked third after direct contact with the company and analyst meetings. Fund managers ranked annual report most important only after meetings with senior management.

A survey of 200 UK financial analysts and fund managers was conducted by Coleman and Eccles (1997). They investigated how adequately specific information items were reported. They found that cash and earnings data were adequately reported and six other valuable measures. Companies however failed to adequately report information relating to, market share, employee productivity, new product development, customer relations, product quality, research & development productivity and finally intellectual property.

Eccles et al., (1998) conducted a survey of 100 senior executives belonging to UK public companies. In their survey they sought to find out the importance of 20 measures that are used in the management of the business and the frequency of communication of these measures to financial analysts and investors. Financial measures were considered to be the most important based on the results, these included cash flow, earnings, costs, and capital expenditure. Other highly rated measures included market positioning factors such as customer satisfaction, market share and market growth. There were some moderately important items according to the survey results and these included segment performance, employee satisfaction, customer retention, employee training levels & retention, employee turnover, product quality and new product development. The less important items included research and

development investment, process quality, environmental compliance, intellectual property and research & development productivity.

Beattie and Pratt (2002) sought out to explicitly investigate the views of users of financial statements in relation to a comprehensive set of disclosure items. Their survey investigated both professional and non-professional user groups. They investigated 538 individuals that use financial report by UK listed companies, the main categories of individuals included expert users, private shareholders, finance directors and audit partners. 22 follow up interviews were also conducted. The respondents of the surveys were required to rate the usefulness of mandatory information categories for the purpose of investment decision making. Based on the results of the study, the highest rated categories of information were those with information relating to financial information, strategy and objectives, management discussion and analysis, background and innovation value drivers. In general Beattie and Pratt (2002) found that the absolute usefulness of information items attributed by finance directors tended to fall below that of users, with audit partners falling between the two positions.

3.7.2 Survey of Individuals

The main areas that were investigated by researchers when assessing individual investors constituted a wide range of information. One of the areas was to assess whether or not individual investors understand accounting terminology that is used in explaining financial statements. Another was assessing what areas of the annual reports individual investors read. Another was to investigate the usefulness of the items of information that individual investors read and ranking them in order of how instrumental they were in assisting the investment decision process.

In a New Zealand study by Wilton and Tabb (1978), they surveyed 300 shareholders. The shareholders were sampled through a process of random selection from registers of two New Zealand companies. The survey results indicated that the most read sections of the annual report were the chairman's report and the profit & loss account, in that order. According to the survey results, the auditor's report was the least read section of the annual report. Similar results were exhibited by Winfield (1978) in a survey of 850 individual shareholders of a Western Australian. Winfield (1978) reported that the chairman/directors' report was the most read section followed by the profit and loss accounts. Other similar results include Anderson (1979) in another Australian study and Lee and Tweedie (1975) in a UK study.

The studies by Baker & Haslem (1973) and Chenhall & Juchau (1977) required individual investors to rank information items found in the annual report. The ranking was assigned on a likert scale of 0-5, where 5 represented very important information. The final rankings that were used for the analysis were based on the mean of the individual rankings of the items that were in the survey results. From the two studies it was found that individual investors ranked forward looking information more highly than historical data.

In a slightly different stream of analysis; Chang and Most (1977) investigated the preferred sources of information by individual shareholders in order for them to make investment decisions. The study which surveyed 1034 individual shareholders concluded that annual reports were the most preferred source of information for investment decisions. Other sources of information that were deemed important were newspapers and magazines. Tips and rumours were also investigated as an information source for investment decision purposes but were found not be a preferred source among individual shareholders. The results by Chang and Most (1977) were in line

with the findings of Winfield (1978) who also concluded from his study that annual reports and the financial press were the two most important sources of information for investment decisions as judged by individual investors. However Baker & Haslem (1973) and Chenhall & Juchau (1977) did not find annual reports to be the most important sources of decision information by individual investors.

Proshare (1999) conducted a survey on the use of the annual report by investigating 1000 telephone interviews of private investors. Approximately 92% of the subjects claimed to read annual reports. Based on the survey results, there are nine sections that were consistently read by those who read the annual report. The nine sections included information relating to dividends, summary information, profit and loss, balance sheet, shareholder information, chairman's statement, director's earnings, operational reviews and the chief executive's report. AICPA (2000) undertook a national investor poll in which they asked 600 investors whether they thought the provision of new information types would be necessary. Based on the results of the enquiry, 875 agreed with the provision of measures of the value of new services and products; 83% agreed with forward looking financial information that was auditor reviewed, 79% agreed with consistent and audited performance indicators that could be comparable across the sector, 78% agreed with corporate responsibility information; 76% agreed with measures of the value of innovation; 75% agreed with high frequency financial information and 73% agree with measures of intangible assets.

3.7.3 Studies of Market Reaction to the Release of Annual Reports

Companies that are listed on a stock exchange often disclose more information. Theory suggests that this assists market participants in accurately valuing the stocks of any such company. Studies on market reaction date back to the sixties and are still on-

going as evidenced below. Over the years, many studies have investigated evidence of whether the market reacts to the release of information about the company and in this case through the release of annual reports.

An early study by Ball and Brown (1968); for example, sought to find out whether information released in the Wall Street Journal and subsequently in annual reports was used by investors. Ball and Brown (1968) therefore investigated whether prior knowledge of company performance would be sufficient in order to make abnormal returns. The study by Ball and Brown (1968) implemented a time-series model of earnings expectations. In the model, the following year's earnings were determined to be equal to the current year's earnings. Through the use of a regression model, Ball and Brown (1968) assumed that the change in a firms earnings was consistent with its historical association with an aggregate market index of earnings. Two portfolios were then formed in which the actual earnings were compared with the estimates developed. Positive[8] and negative[9] forecast error firms were arranged into separate portfolios. These portfolios were formed twelve months before the release of the actual earnings figures. The idea was to assess whether investors can make use of this prior knowledge to earn abnormal returns.

Ball and Brown's (1968) results indicated that positive forecast error firms outperformed the market while negative forecast errors firms performed worse than the market. It was found through the study that the majority of changes in stock prices occurred in the first quarter of the year. Towards the periods of earnings releases, it was found that there was minimal movement in share prices suggesting that time delays almost totally discounted actual earnings releases. The end result was that it was

[8] Firms for which the actual earnings exceeded the expected earnings.

[9] Firms for which the actual earnings were less than the expected earnings.

impossible to make abnormal returns based on the earnings as stated in the annual reports when they were released.

It was however argued by Beaver (1968a) that annual reports contain useful investor information. Beaver (1968a) observed stock price and stock volume reaction using time series analysis. Beaver (1968a) concluded that earnings reports possessed information content. The price and volume reactions indicated that the expectations of investors were altered by the release of the earnings reports. Changes in equilibrium prices also demonstrated changes in the behaviour of the market in general.

The information content of disclosures was tested in the UK by Rippington and Taffler (1995). The four releases investigated in their study were the (1), the preliminary announcement (PA); (2), annual reports and accounts (ARA); (3), annual general meeting (AGM) and (4), interim report (IRs). The results from their study revealed that all four contained information content but preliminary announcements and interim statements convey the most substantial amounts of new information. Based on the results, it was argued in the study that annual reports seem to contain less information content to market participants in comparison to the other three mediums. The issue was therefore investigated further. Rippington and Taffler (1995) matched 29 firms with large annual reports and accounts outlier residuals with similar number of firms but low residuals. In this stage of the research, any financial press comments that related to the annual report and accounts were scrutinised and note was taken for any stock price sensitive information. According to the data, an average of 1.34 items were identified per company and 60% of them related to the chairman's statement and balance sheet, this was compared with just one such item for the control group (Rippington and Taffler, 1995). The conclusion from this part of the study was that

despite the subjective analysis, there is evidence to support the argument that there is information content in the annual reports and accounts of some firms.

Gajewski and Quere (2001) examined the market reaction to annual earnings announcements on the French capital markets. In the study, they compared actual with expected earnings by financial analysts. The results from the study revealed that positive unexpected earnings lead to positive abnormal returns, while negative unexpected ones cause negative returns. These results confirmed earlier findings by Gajewski (1999) that revealed that trades significantly increase around earning announcements. The study was conducted on the Paris Stock Exchange. In a Swiss study, Caramanolis-Cotelli et al., (1999) investigated the influence of disclosure quality on the market reaction to annual reports. The proxy used for disclosure quality in this study was a measure that was computed by the Swiss Financial Analyst Federation (SWAF). The results revealed a positive relationship between this variable and absolute abnormal stock returns. Caramanolis-Cotelli et al., (1999) suggested based on their results[10] that "good firms" may be perceived to adopt policies that exhibit high quality disclosure to signal their nature to the market.

Under the topic of delays in the publication of the annual report it has been noted that there is information content in the annual report information because numerous studies (such as Bamber and Stratton, 1997, Cloyd et al., 1998, Lennox, 1999, Teoh, 1992) concede that delays in the publications of these reports have an impact on share prices. Dardor (2009) in a study that focused on annual report publishing delays in Libya supports this argument. Libya for example does not even have a capital market, shares in companies are primarily owned by companies that

[10] The influence of disclosure quality was significant for positive abnormal returns only.

are state owned but they still look to the annual report for information. Dardor (2009) then goes on to state that although this being the case, delays in the publishing of the annual report affect the decisions of banks, the tax authority, and the auditing authority. This finding supports the argument that annual reports bear information content. In addition to the suggestion by Dardor (2009), it was posited by Owusu-Ansah (2000) that the timeliness of financial reporting is a significant characteristic of accounting information. He goes on to suggest that if the reports are not published early then the information embedded would be useless to decision makers. It may also on this premise be suggested that annual reports hold information content, if they did not then timeliness would be an irrelevant area of research in terms of the release of the annual reports.

The issue of information content is however an on-going area of research both in the UK and abroad. As part of this section it is also worth noting that the studies discussed only provide a cross section of the issue as it is not possible to discuss all the previous studies on market reaction to the release of annual reports. The main reason for the need for further research can be attributed to the diverging results on the reaction to the release of annual reports. Firth (1981) in the UK for example suggests that annual reports have some incremental value whilst Rippington and Taffler (1995) suggested that annual reports have less information content compared to other mediums such as primary announcements and interim statements. Ball and Brown (1968) in the USA indicated through their study that annual reports have very little information content as opposed to Beaver (1968b) and Cready & Mynatt (1991) who argue that annual reports have some incremental value for capital market participants. The following section analyses the non-capital based theories.

3.8 KPIs and Qualitative Characteristics of Useful Financial Information

3.8.1 KPIs and their Usefulness in Financial Information

The introduction of the requirement to report on key performance indicators by the Companies Act 2006 is a response to the need to improve the usefulness of financial reports to their users. "KPI's are factors by reference to which the development, performance or position of the business of the entity can be measured effectively. They are quantified measurements that reflect the critical success factors of an entity and disclose progress towards achieving a particular objective or objectives,' (ASB, 2006b, RS1 paragraph 4). From the definition, it may be seen that the objectives of the inclusion of KPIs in annual reports are in line with the objectives of financial statements according to the IASB. "Financial statements should provide information about the financial position, performance and changes in the financial position of an entity that is useful to a wide range of users in making economic decisions" (I.A.S.C., 1989, praragraph 12)[11].

The reporting framework for KPIs recommends the following items to be included when describing them: Definition and calculation, Purpose, Source of underlying data, Reconciliation to financial statement information (where applicable), Quantified target, Quantified data, and whether changes have been made to the source or calculation of data. The simple yet effective approach in the reporting of KPIs seems to be in place in order to allow various users to have an understanding of the critical success factors of the reporting entity regardless of their financial sophistication. KPIs may therefore be found in both the full annual report

[11]The statement however adopted by the IASB in 2001, was originally printed as part of the Framework for the Preparation and Presentation of Financial Statements (1989).

and in summary financial statements that are mainly directed at private individual investors.

3.8.2 Qualitative Characteristics and their Usefulness in Financial Information

As this chapter is about the information needs of annual report users; this section discusses briefly the guidance according to the IFRS of what the qualitative attributes of financial information are. The general idea therefore being that information disclosed in annual reports following these guidelines will therefore be more useful to annual report users. To aid in the usefulness of the annual reports to its users, the IFRS Conceptual Framework for Financial Reporting 2010 was approved by the IASB. Among other issues raised in the framework, a particularly relevant issue is that of the qualitative characteristics of useful financial information. This section simply explains how changes within financial reporting are developing in a manner that streamlines information to stay relevant. This section explains the quality aspects that provide a framework for financial reporting such that information retains value to all users thus meeting their information needs. The qualitative characteristics of useful financial reporting identify information that would aid users in making decisions about the reporting entity. The IFRS (2010) asserts that the qualitative characteristics have equal application to financial information in general purpose financial reports as well as to financial information provided in other ways according to sections F QC1 and QC3. Six items are identified as fundamental qualitative characteristics.

First, *Comparability* of information is important to users of annual reports in order to compare the financial statements of an entity over time so that they can identify trends in its financial position and performance. Users must also be able to

compare the financial statements of different entities (I.F.R.S., 2010, F.39-42). Second, financial information needs to be *Understandable.* Information should be presented in a way that is readily understandable by users who have a reasonable knowledge of business, economic activities and accounting; they must willing to study the information with reasonable diligence (I.F.R.S., 2010, F.25). Third, *Relevance* in financial reporting refers to information which influences the economic decisions of users. This process is normally done through the provision of information in financial statements that helps in (a), evaluating past, present, or future events relating to an entity and (b), confirming or correcting past evaluations they have made (I.F.R.S., 2010, F.26-28). Information in financial statements needs to satisfy both[12] aspects of relevance.

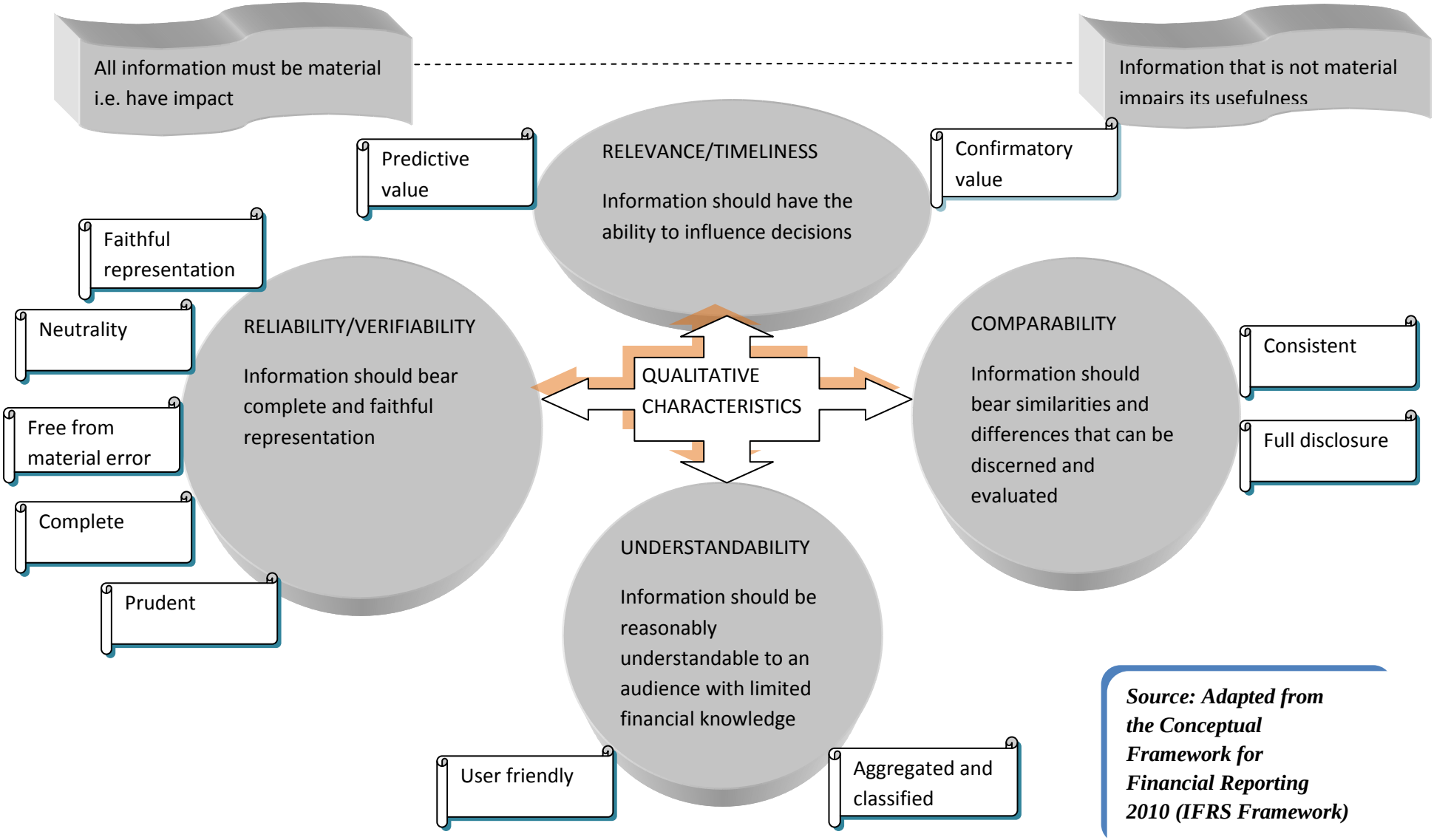
Fourth, *Reliability* is an important characteristic. Information in financial statements is reliable if it is free from material error and bias and can be depended upon by users to represent events and transactions faithfully (I.F.R.S., 2010, F.31-32). It is important to note that there is sometimes a trade-off between reliability and relevance. Reliability is affected by the use of estimates and by uncertainties associated with items recognised and measured in financial statements. The fifth and sixth items are *Verifiability* and *Timeliness.* Verifiability aids the users of financial information in ascertaining the faithful representation of financial reporting information. Verifiability also assumes that different user groups if financial reporting information could somewhat reach an agreement in the interpretation of reported information (I.F.R.S., 2010, F QC26). Finally information is deemed timely

[12] (a) Materiality, information is material if its omission or misstatement could influence the economic decisions of users (IFRS 2010, F.29) and

(b) Timeliness, in order to be useful, information must be provided to users within the time period in which it is most likely to bear on their decisions (IFRS 2010, F.43).

if it is available to decision makers in such a time that it is capable of influencing their decisions (I.F.R.S., 2010, F QC29).

Figure 2: The Qualitative Characteristics of Financial Information



Source: Adapted from the Conceptual Framework for Financial Reporting 2010 (IFRS Framework)

3.9 Summary and Conclusion

This chapter was aimed at discussing the users of the annual reports and what information they seek from reporting entities. This chapter commenced by analysing the objectives of financial reporting. In this section the major conclusion was that although there are variations based on different cultures and jurisdictions, the main objective of financial reporting is however to provide users with information that is useful to them for making investment decisions. At this point there was the strong question of who these annual report users are. Having looked at some accounting literature about the different users of annual reports, several user groups were suggested in the extant. Some of the studies investigated suggested that there were two main user groups of annual reports, shareholders and creditors. Other studies, for instance Gray and Roberts' (1989) suggested that there were more than just shareholders and creditors who use annual report information. This finding about the existence of several annual report information user groups is consistent with empirical evidence produced by UK studies.

The studies identified in the literature reviewed were further investigated to assess the information needs of the users of annual reports. The majority of the arguments suggested in this section pointed that the relationship of the users groups with the company determined their information needs. Along this line of argument, it was found that suppliers for example would seek information that would assist them in deciding about the best lines of credit that can be made available to the company. Equity investors for instance would seek information that is related to the likely movements in the prices of equity stocks, future dividends and management efficiency.

After having looked at the information needs of users of annual reports, the following discussion looked at the similarities and differences in the information sought

by different users in separate groups as well as different users within the same group. There was conflicting evidence suggested in the different studies that were analysed for this part of the chapter. Some studies reported that the information sought by different user groups was similar while some reported that there were significant differences in the information needs of different users. Some of the studies that suggested that the information sought by different user groups was substantially similar were criticised for demonstrating some form of bias. Within such studies, the groups that were investigated did not cover a broad scope of user groups. Those studies that reported that there were significant differences in the information needs of different users had on average investigated a wider range of information users. The studies that suggested that there were substantial differences in the information needs of different user groups also pointed out that those different users have different levels of comprehension of financial reporting information hence have a different understanding. Following the trend of understanding the information in annual reports, the researcher continued to look at these differences in the levels of understanding as a separate section. Two studies in the UK for instance Lee and Tweedie (1977, 1981), provided evidence that private shareholders and some institutional shareholders did not understand accounting information provided in the annual report.

This situation was escalated by privatisation policies which were adopted in the 1980's which had led to an increase in the number of private shareholders with little or no understanding of accounting information. It was therefore argued that the Companies Act 2006 recognised this lack of understanding of the full annual report among private shareholders in the UK. In response, the Companies Act 2006 s.426 (Option to provide summary financial statement) provided within regulation, the option for listed companies to send out an abridged version of the annual report to shareholders

who would wish for such an option as opposed to the full annual report. The abridged version proved to be less confusing and easier to understand for private shareholders who in the majority of cases are not financially sophisticated individuals.

The usefulness of annual reports to their users was then examined. The main sets of users identified for the investigation were individual shareholders, financial analysts and corporate bodies. There were mixed findings over the usefulness of annual reports among corporate bodies and financial analysts. According to Clift (1973), it was found that financial analysts and corporate bodies used annual reports as a major source of information for their decision making purposes. On the other hand, studies like Mason (1971) indicated that annual reports were not substantially useful to the same user groups for the same purpose. The existing evidence was also conflicting for usefulness of annual reports to individual shareholders for instance Baker and Haslam (1973) indicate that annual reports are not useful to individuals in investment decision making whilst Chang and Most (1977) indicate that annual reports were their main source of information in order to make investment decisions.

The final section discussed in this chapter was the aspect of KPIs and the qualitative characteristics of financial reporting information. Judging from the latest developments in financial reporting, it appears that regulatory bodies within accounting continue to uphold increasing the usefulness of financial reporting information. The definition and objectives of KPIs according to ASB (2006) compared to that of the objectives of financial reporting according to IASC (1989) demonstrate congruency. The IFRS (2010) also highlights six qualitative characteristics that clearly try to address the problems of the annual reports being directed to a wide and varied audience. The qualitative characteristics play two main roles, the first being to recommend to providers of financial information to disseminate useful material. Secondly to provide

information from which readers can reach a consensus over the interpretation of reported information despite the annual report users' diverse backgrounds.

Chapter 4

Theoretical Framework

4 Theoretical Framework

4.1 Introduction

The aim of this chapter is to discuss the motivations why management disclose information in their annual reports. This chapter will assist in explaining the motivations for KPI disclosures after reviewing the underlying theories that explain the disclosure of information in annual reports. Disclosure of such information will be a signal of the fulfilment of their responsibilities to the market and the stakeholders at large. The first section 4.2 of this chapter will discuss the main aims and theoretical background behind market related information in annual reports. Non-market related disclosures will be discussed in section 4.4.

Under capital market based theories, the chapter discusses the signalling theory, capital needs theory, management talent signalling theory and the efficient markets hypothesis (EMH) over section 4.2.1 to 4.2.4. Information disclosure and the cost of capital are discussed in section 4.3. The second half of the chapter discussing non-capital market based theories discusses the agency theory, stakeholder theory, legitimacy theory, stewardship theory, theory of constraints (TOC) and political costs theory over sections 4.41 to 4.4.6 respectively. The chapter closes with a summary of the discussions and draws some conclusions.

4.2 Capital Market Based Theories

The previous chapter identified and discussed the users of annual reports and their information needs. The literature strongly indicated a pre-occupation with financial markets. From the literature in Chapter 3 it was suggested that annual report disclosures by finance directors are to an extent influenced by financial

analysts. Equity investors and analysts for instance are primarily interested in capital market information to aid them with their investment decisions. Gray et al. (1995, p. 46-47) add to this argument by stating that "... more generally, accounting information is a mechanism for conflict resolution between various stakeholders for both explicit and implied contracts, for example, between shareholders and bondholders, and even between the firm and society." Based on the above, it is a reasonable expectation to anticipate companies to disclose information that is market related.

There are several arguments that have been put forward in the past to suggest that listed companies are likely to disclose market related information (Iatridis, 2008a, Wang et al., 2008, da Silva Monteiro and Aibar-Guzmán, 2010, Gamerschlag et al., 2011). Ronen and Livnat (1981) suggest that managers will disclose market related information if they believe that it would increase the wealth of the reporting firm's shareholders equally in agreement with Iatridis (2008a). Horton and Serafeim (2010) suggests that market information will signal good news about the company. Diamond (1985) suggests that if traders were to face lower costs for acquiring company information, risk sharing is improved by making traders' beliefs more homogeneous. Barry & Brown (1986) and Merton (1987) investigate Diamond's (1985) argument and reach the same conclusions that managers can reduce their cost of capital by reducing information risk through increasing the level of disclosure. Finally, it was suggested that increased market information disclosures will reduce information asymmetry which would in turn reduce the company's cost of capital (Diamond and Verrecchia, 1991, Healy and Palepu, 2001, Cheng Chee Mun et al., 2011, Deborah and Patricia, 2012). The proceeding sections assess accounting

theories that may explain disclosures. Theories that are relevant to private limited companies are discussed under non-capital based theories.

4.2.1 Signalling Theory

When problems arise because of the existence of information asymmetry in the capital markets, signalling may be used to alleviate them. Information asymmetry may be reduced by firms through releasing information to less informed stakeholders such as a company releasing the annual report to its shareholders. The theory was first developed in economics (e.g. Akerlof, 1970, Spence, 1973). It was mainly used where customers were imperfectly informed about products and services available on the market. Signalling is a general concept that may be applied in any market that is characterised by an information imbalance.

Signalling has been used in previous studies to explain managers' interests in voluntarily disclosing information about the prospects of the reporting entity to the capital market (Ross, 1979). They argued that capital markets provide an objective evaluation of management performance through the prices placed on company shares by financial markets. Good managerial performance drives share prices up, the reverse is also true. This evaluation however, is only based on the information available to the market. Share prices are driven down by the market in the case of high information asymmetry. The general perception is that lack of disclosures reflects that there is bad news being withdrawn from the market. Increased disclosures have the effect of raising the company's share prices. There is also an associated likelihood of management compensation to increase as a result of good performance. Ross (1979) suggests that companies without news are also encouraged to report in a bid to distinguish themselves from 'lemons' as Akerlof

(1970) put it. Companies whose shares are undervalued would incur an opportunity loss unless they disclose information[13] to the market which then adjusts the company's share price.

Bar-Yosef and Livnat (1984) argued that auditor involvement in company affairs might be a signalling tool. They suggest that engaging an external auditor by high valued firms signals the quality of the information disclosed. Secondly they argue that companies that use large audit firms signal their superior cash flow status by using this expensive service. Okcabol and Tinker (1993) suggest that external auditors are unlikely to approve the disclosure of information that would mislead the market therefore their engagement symbolises good quality information disclosures. The signalling theory however fails to account for non-financial motivations for suppressing information disclosure (e.g. Okcabol and Tinker, 1993). One of the main non-financial issues that can be identified is the protection of competitive advantage. Elliott & Jacobson, (1994a) support this argument by suggesting that information disclosures on items such as earning projections, research and development and segmental information pose the possibility of threatening the reporting entity's competitive position. Non-disclosure of information therefore opens a loophole in that suppressing information may not always reflect that there is bad news about the company, it may just be a case of protecting competitive position. Investors would need to make rational judgments. Management generally disclose information with which the benefits outweigh the costs, both financial and otherwise. Finally, Lopes and Rodrigues (2007) in their study on disclosures among

[13] Such information may be viewed as knowledge to change the perceptions of the stakeholders and more importantly, the perceptions of capital market participants. The prudence and accuracy of information disclosed in such situations may be questionable.

companies listed on the Portuguese stock exchange suggest that proprietary costs vary according to the industry within which they operate. Companies that are in the same industry therefore tend to have similar levels of disclosures in order to avoid negative appreciation by the market (competitive pressures). This argument they posit is in line with the signalling theory.

4.2.2 Capital Needs Theory

Arguments that higher levels of disclosure reduce the cost of capital have been identified as early as 1957. Horngren (1957) posited that well-informed analysts and investors are likely to influence a favourable impact on the company's share prices. Shores (1990) suggests that investors are faced with investment decisions and must do so based on the amount of information they possess. This situation therefore entails that there is a level of risk involved as there is normally some form of uncertainty over available information. Increased information about a reporting entity plays the role of reducing the level of uncertainty that investors face in the decision making process. Higher transaction costs for trading shares of a company are normally associated with information asymmetry too. This situation gives rise to an increased required rate of return and pushes current equity stock prices down. Many authors have argued that managers who increase the information available on the market about their company tend to reduce the levels of information asymmetry (Botosan, 1997, Sengupta, 1998, Lambert et al., 2012, Akins et al., 2012). The reduction in information asymmetry should have the effect of maximising the value of the reporting firm.

Botosan (1997) suggested that reducing investor uncertainty through increased disclosures would encourage them to accept a lower rate of return which

filters down to the company in the form of a lower cost of capital. Plumlee (2002) further proposes that the cost of equity is inversely related to the level of market risk. Sengupta (1998) reports a similar inverse relationship but with the costs of debt in that study. Li (2010) in a later study of 6456 European Union (EU) companies added that not only increased disclosure but dissemination of information that is comparable are the two main mechanisms behind the reduction of cost of equity. Piotroski (2000) provides evidence that additional segment disclosures increase the market capitalisation of a firm's earnings.

Securities with wide bid-ask spreads have been found to have a higher cost of equity capital (Yoon et al., 2011). This normally occurs due to investors claiming compensation for the high transactions costs and in turn demanding a high return on investment. In general, riskier[14] companies tend to have larger bid-ask spreads. Coller and Yohn (1997) show that management forecasts reduce the bid-ask spread while Welker (1995b) and Healey et al. (1999) found an inverse relationship between disclosure quantity and quality with the size of bid-ask spreads. Tauringana (1997) suggests that reporting entities that disclose more information can reduce the adverse selection component of the bid-ask spread and reduce their cost of equity capital.

Sancetta (2008) and Byrd et al., (1995) among others; in their studies found that companies that hold meetings with financial analysts tend to see their company shares rise subsequent to such meetings. A new share issue within such companies would entail that the business entity would acquire larger net proceeds and in turn a lower cost of capital. Byrd et al., (1995) also found that in situations where analysts and investors are not well informed, it is likely to have an unfavourable impact on

[14] Where risk is determined by the amount of information about the company available to the market.

that company's share price. There is therefore the likelihood of a ripple effect between a lowering of the company value and an increase in the cost of capital. Healy and Palepu (1995, 1993) advance the argument and suggest that the same situation applies not only with raising equity but also in the issuance of public debt. They hypothesise that investors' perceptions of a firm are important to corporate managers who anticipate issuing public debt and equity in the short term. Such managers are essentially incentivised to make increased disclosures in the annual reports to counter the information asymmetry problem and consequently reduce the cost of capital (Lambert et al., 2007, Hughes et al., 2007, Lambert et al., 2012, Armstrong et al., 2011).

The cost of capital is vital to any business seeking additional capital funds. Investment financing decisions are therefore aligned with disclosure policies of the reporting entity. The majority of firms that seek to issue equity shares or public debt would attempt to reduce the costs of capital through increased disclosures. The disclosure of information allows the capital market's efficiency in lowering the cost of capital. Atrill (1986) and the ASB (1997) for example suggest that it does not only end there. The reporting entity has a duty to provide regular updates about the company in order to help investors in their assessment of future cash flows and indeed projecting future financial performance. Such information provision is thought to reduce uncertainty thereby lowering the investors' required return (Bergman and Roychowdhury, 2008, Iatridis, 2008b, Hassan et al., 2011a).

Companies that frequently raise equity from the market are likely to disclose more information than companies that do not (Cooke, 1989a, Abdul Halim and Baxter, 2010, Whiting and Woodcock, 2011). This line of thought is however contrary to those who argue that companies would disclose all material information

anyway to capital markets even in the absence of disclosure regulations. Some firms rely on financial institutions in order to raise capital. In such situations, information is normally disclosed privately such that only the financial institutions have all the material information about the reporting entity. Some UK evidence proves that financial institutions already know the information that is disclosed in annual reports via private information disclosure by companies seeking private financing from them (Holland, 1997, Holland, 1998). In Finland it was found that listed companies that relied on financial institutions for their financing needs reported less information in their company reports (Schadewlitz and Blevins, 1998).

4.2.3 Management Talent Signalling Theory

Investors determine the value of a firm through their perception of the management's adaptability to the economic environment within which the firm operates (Trueman, 1986). The idea he proposed was that talent managers wish to demonstrate their prowess by making voluntary earnings forecasts. This would be performed as a bid to disclose their 'kind' according to Trueman (1986). The aim of the forecasts would be to provide investors with a positive assessment of the abilities of the management. The forecasts made, mainly predict changes within the economic environment within which the relevant company operates and would therefore aid in selecting appropriate production plans. It may be suggested that earnings forecasts may indicate a strong position for the company in the future and this may entail a stronger share price being interpreted by the capital markets.

Mangena (2004) suggests that "the earlier investors infer that the managers have received information, the more favourable will be their assessment of the managers' ability to anticipate future changes and the higher will be the firm's

market value." Managers of reporting entities use annual reports as their main reporting tool in signalling their ability in responding to the economic environment. The reporting of information by management to investors through annual reports does not only signal their adaptability but also details their perceptions and what actions they are taking, for example the altering of production plans. The reporting of such information to investors in annual reports aids in reducing uncertainty in the capital markets and strengthens the company's share prices (Healy and Palepu, 2001). Tasker (1998) suggests that reporting such information by managers has an impact on their careers as it may reinforce their positions within the reporting entity and improve their prospects on the job market.

4.2.4 Efficient Market Hypothesis (EMH)

Annual report disclosures may be thought of as having an impact on company valuation. This section on EMH looks to discuss whether markets react to disclosures. If markets are responsive to disclosures, then it is essential to analyse the EMH as this thesis looks to investigate factors that influence the level of disclosures made in annual reports primarily focussing on KPIs. Throughout some of the discussion in this chapter and those in Chapter 3 (Annual report users and their information needs), it may be seen that some studies argue that annual reports are of minimal value to investors. The general argument posited by such scholars is anchored on the timeliness of the annual report. It is argued that annual reports come about too late for the information within them to have a significant effect on the market. The question therefore becomes one of how efficient the market is, if annual reports are thought to be useful. This chapter primarily aims to discuss the efficiency of the market. If it turns out that the markets are efficient, the implication is that those who argue that the annual reports come out

too late will be vindicated. On the other hand, if the markets are found not to be efficient, then the annual report will be significant in providing useful information to the market which influences company valuations. Tauringana (1997) goes on to suggest that management would be justified in volunteering to make additional disclosures over and above those mandated by Generally Accepted Accounting Principles (GAAP). The following discussion therefore evaluates market efficiency in greater detail.

Fama (1970a) asserted that in accordance with the EMH, it is impossible to outperform the market. According to Fama (1970a), EMH operates under four main assumptions. The first being that there is utility maximisation, secondly that individuals are rational, thirdly; they have homogenous expectations and finally, information comes at no cost. On close inspection, it may be seen that these assumptions of the EMH reflect that there is no information asymmetry in the agency relationship between investors and managers. The implications under these assumptions of the EMH are that only normal returns can be made through investment on financial markets. The return can only be normal because prices are adjusted through incorporating all available information instantaneously and accurately. Though EMH does however recognise a degree of imperfection in the market, it is largely categorised under the mainstream economic school of thought. Fama (1970a) recognised that there is random movement in share prices when new information enters the market. The movements are normally distributed such no one can make abnormal profits based on the new information. Fama (1991, 1998) in his deduction also takes into account that some investors may over- or under-react to the release of information. Table 5 summarises how Fama (1970b) theorised market efficiency under three information types based on their availability on the market.

Table 5: Forms of the Efficiency Markets Hypothesis

EMH Form	Information Type
Weak Form Efficiency	Information in past share price trends
Semi-strong Form efficiency	All publically available information
Strong Form Efficiency	All publically and privately available information

According to the table it may be seen that markets are deemed efficient in relation to the information set that it reflects the most.

4.2.4.1 Weak Form Efficiency

Through the weak form of market efficiency, it is impossible to make gains from predicting future prices through the analysis of past share prices. Kyeyune (2010) explains that "technical analysis as an investment strategy for modelling future returns through trend analysis of past share prices does not result into future excess returns." Malkiel (1996) suggests that affirmed, the randomness of share prices exposes investors to an equal chance of making excessive gains. Malkiel (1996) also suggests that this applies to both the sophisticated and unsophisticated investor. This assertion is independent of the past performance of the security on the market.

There is however divergent evidence on the random walk theory. Dickens and Shelor (2003) used stochastic dominance to confirm Malkiel's (1996) conception that there is no difference in expertly picking or randomly picking stocks to invest in

on the S&P 500, DJIA, NASDAQ and the Russell 2000 indices. Saad et al., (1998) found results that were contrary to the weak form efficiency or the random walk hypotheses. They found that market prices tend to trend from intervals as short as a week. Granger and Morganstern (1963) in their study on the New York Stock Exchange (NYSE) found that long term price movements did not conform to the weak form efficiency but short term price movements supported the random walk theory.

The research identified on testing weak form efficiency in the UK dates as far back as 1953. Kendall (1953) examined the presences of weak form efficiency in the UK Actuaries Index of industrial share prices for the London Market. Kendall (1953) performed an estimation of the correlation coefficients between price changes of share prices at different periods. The results of the study demonstrated irregular changes in share prices thus supporting the random walk theory. Other studies in the UK post 1953 empirically conformed to the random walk theory (e.g. Brealey, 1970, Cunningham, 1973, Dryden, 1970) using trading data. It must however be noted that some studies in the UK display results that diverge from the random walk theorem across the FTSE All Share, 100, 250 and 350 (Opong et al., 1999).

The correlation tests for independence in the study by Opong et al., (1999) did not exhibit an identically distributed and independent pattern. They concluded that the movements on the indices were not purely random because cycles tended to appear than in what would typify a true random model. Belaire-Franch and Opong (2005) provided further evidence suggesting that UK FTSE indices do not follow a random walk through the use of both parametric and non-parametric tests. They suggested that high analyst following and high liquidity levels explained the relatively lower level rejection of the random walk for the FTSE 100 compared to

other indices. There are also studies that provide evidence for the size effect with regards to the random walk theory on the London Stock Exchange (LSE) for example Mills and Jordanov (2003). According to their study results, they found that the largest securities had the highest potential to reject the random walk hypothesis as opposed to the smaller securities. Mills and Jordanov (2003) however stated that their results were only applicable to the tested sample. They suggested that the results could not be superimposed to explain EMH in different market settings and at different time periods.

4.2.4.2 Semi-Strong Efficiency

Semi-strong form efficiency is mainly concerned with how quick and how accurate financial markets adjust share prices based on the release of new information in such a way that it is impossible for investors to make abnormal returns based on the information. Fama, et al., (1969) is one of the earliest empirical works documented on semi-strong efficiency. He examined the impact of information implied by stock splits on share prices in the US. The results of the study revealed that information was instantaneously incorporated in share prices upon its release such that abnormal returns were not a possible yield after the announcements. Franks et al., (1977) in the UK conducted some of the early tests in the country. In the study by Franks et al. (1977), information about 152 mergers was predicted three months prior to the event. Abnormal returns did not accrue as a result of publication of the information on the mergers due to the anticipation of the news, this symbolised that the market was semi-strong efficient. It was also suggested that there would not be any miniature returns as these would be cancelled out or rather absorbed in transaction costs.

Fama (1970b) suggested that neither technical nor fundamental analysis can be used to outperform the market. Under semi-strong form efficiency, the release of annual reports would adjust share prices based on the information encapsulated, however the information may not be the basis of yielding abnormal returns from any investments based on it. In reference to the current study it may be argued that if the market is semi-strong efficient, the release of KPI information within annual reports should yield abnormal returns equal to zero for investors.

Healy and Palepu (2001) explained in their study that agency arises when investors relegate the role of utilising their funds to managers. The investors' equity may however be devalued if the managers make self-interested decisions in which they expropriate investor funds inappropriately, for example through exorbitant pay packages. One of the ways in which this phenomenon can be reduced as suggested by Healy and Palepu (2001) is through the signing of optimal contracts between the managers and the owners of the business. Such contracts may assist in reducing information asymmetry through the requirements of managers to disclose information about the firm's performance. Via this process investors may better assess the management's performance in maximising their investment return. Corporate governance mechanisms may be put in place such as using a board of directors to monitor the management on behalf of the shareholders of the company. In such an instance, information asymmetry may be reduced by management reporting its performance to the board and the board assesses the performance on behalf of the shareholders.

Healy and Palepu (2001) suggest another option of mitigating the agency problem. They suggest the use of information intermediaries. Information intermediaries refer to using the services of personnel such as financial analysts and

rating agencies. Such personnel often engage in the collection of information to do with the misuse of funds by management, such information would in turn help in reducing information asymmetry as managers would aim to keep their shareholders informed about their performance in a bid to retain their positions and a possible increase in remuneration. The role of information intermediaries may at times be enhanced through regulation.

Watts and Zimmerman (1978, 1986) argued that even in a semi-strong efficient market, management would give preference to providing disclosures such as information on KPIs in a bid to reduce information asymmetry and agency costs. The disclosure of information by management would assist with avoiding the costs that would be otherwise involved in drawing up and enforcing contracts as well as political costs that may be suffered in regulatory processes. In support of this argument, several studies (e.g. Barry and Brown, 1985, Healy and Palepu, 2001) have backed the notion that that managers who engage in capital market transactions have an incentive to provide information such as KPI disclosures in order to reduce the information asymmetry and consequently the cost of capital.

There are some studies that presented evidence that is contrary to the findings discussed above such as Fama et al., (1969) and Franks (1977). Firth (1976) for example observed abnormal share price movements prior to the announcement of take-over bids. It was suggested that that this finding may have been due to the leakage of information prior to the announcements. Although leakage was suggested to be the main probability of the phenomenon, the possibility of predictions made by investors was also considered. This overall finding hinted at market inefficiency however the cases found to exhibit this phenomenon were far and wide apart.

Other studies such as Ball (1978) and Bernard & Thomas (1989) observe post-announcement drifts in share prices after a new piece of information is published. Ball (1978) suggested that such drifts may be the outcome of misspecification of market equilibrium by omission of a component in the computational model. Alternatively Ball (1978) suggested that it may be the result of failures in market efficiency in incorporating new information in the adjusting of share prices. In the study by Ball (1978), it was suggested that information processing frictions and the high cost of using new information may have deterred the market's ability to adjust prices according to the predictive potential of the news. Although Ball (1978) was more inclined to suggesting that the market inefficiency brought about the post-announcement drifts. Bernard and Thomas (1989) however found it hard to suggest the cause of the drifts thus the lack of understanding of autocorrelation between quarterly returns within the market. Drifts could be a result of misspecification in measuring abnormal returns and not necessarily evidence of market inefficiency. Fama (1991) also disagreed with the notion that participants did not understand earnings movements. He suggested that close analyst following of share price movements could not simply point out to the inability to understand movements.

4.2.4.3 Strong Form Efficiency

In a strong form efficient capital market, it would be possible to make abnormal gains from an investment. In such a market share prices are adjusted through both public and private information being taken into account. In a strong form efficient market, even those who engage in insider trading would not be able to make an arbitrage advantage. Strong form efficiency and semi-strong form

efficiency markets may be likened to each other in that in both types, financial reporting would have no effect in adjusting share price returns as these would already be taken into account in the adjustment. Strong form market efficiency also assumes that there are no legal barriers impounding the public disclosure of private information. Such a market would not require any regulation as the market operates at optimal efficiency without the risk of market failures. Huddart et al., (2001) nonetheless suggest that regulation of public disclosure of private information undermines the effectiveness of strong form efficiency in the real world.

Previous studies that have tested strong form market efficiency have suggested that markets are inefficient for example Jaffe (1974) and Lorie & Niederhoffer (1978). Their tests checked for the presence of abnormal returns from insider trading. Based on these findings, it largely entails that individuals can make use of price sensitive private information to outperform the market. Jaffe (1974) argued with evidence from his study that individuals can make use of inside information to make abnormal returns and even when the information used becomes public knowledge, abnormal returns can be made from using the same information for months henceforth.

Seyhun (1986) agreed with the arguments posited by Jaffe (1974) but however did not find supporting evidence based on their study. Seyhun (1986) argued after the findings suggested that Jaffe's (1974) results may have been influenced by the methodology implemented in the study. Further to Seyhun's (1986) arguments, they further argued that the size effect had an effect on insider trading. It was concluded that large securities have lower average returns than small securities because they were more prone to insider selling while small securities showed greater proportion of insider buying.

Jaffe's (1974) findings that the stock exchange is strong form inefficient was also supported by Pope et al., (1990) in a UK study. They investigated the level of returns that were a result of the of the directors' share dealings. The results of the findings reflected that an investment strategy that was based on directors' share dealing would yield abnormal returns save by transaction costs and bid-ask spreads.

4.2.4.3.1 Market for Information

Gonedes and Dopuch (1974) suggest that the assumptions of EMH are considered to be unrealistic given that participants are human. It must be considered that some of these participants may not behave rationally because naturally human beings have diverse expectations. The other matter that requires to be put into consideration is that there are different levels to the access of information as well as different abilities to assess the information that will have been accessed. Information asymmetry is brought about in the market for capital through the presence of agency between investors and managers. Further information asymmetry is also brought about by the diverse characteristics of the participants in capital markets. KPIs for instance may cover a variety of areas such as financial KPIs (e.g. revenue, operating profit, earnings per share etc.) and non-financial KPIs (footfall, carbon footprint, reported incidents & accidents etc.). These different categories and types of KPI disclosures all have a different audience and understanding depending on the information user. This issue ties in with the discussions in Chapter 3 when exploring the similarities and differences in the information sought by users of financial reporting information.

Gonedes (1976) follows up by explaining that EMH inadequacy is largely brought about by the heterogeneity of market participants' expectations and the

consequent exclusive and expensive use of financial disclosures. Demsetz (1970) and Gonedes (1975) suggest that disclosures are perceived by capital markets as a commodity that is demanded and supplied due to its ability to manipulate share prices. Gonedes and Dopuch (1974) offer criticism over the semi-strong market efficiency's assumption that all available information is spontaneously and correctly reflected in share prices at no cost by market participants having homogenous expectations resultantly denying any participant the opportunity to yield abnormal returns. Management in this kind of market will supply information disclosures to investors in a bid to reduce agency costs and also raise capital at lower costs on the market for capital.

4.2.4.3.2 Market for Corporate Control

Parkinson (1993) explained that the effectiveness of the market for corporate control is determined by the market's efficiency or rather the efficacy of the EMH. In the market for corporate control, share prices will promptly and accurately reflect the performance of the management whether it is good or poor. Declining share prices will be perceived as poor managerial performance. This will lead to the call for a replacement of managers if the poor trend continues. Management therefore aim to ensure optimal performance in a bid to retain their positions. Deakin and Singh (2008) suggest rejection of the EMH due to the ineffectiveness of the market for corporate control based on market crashes, for example the 1987 US stock market crash, the Asian exchanges crash in the 1990s and the bursting of the technology securities in 2001. The argument that can be put forward here is that the effectiveness of the market for corporate control is questionable as it relies on the

EMH and should have been able to identify the crashes before they came into fruition and therefore avoided.

Information arbitrage efficiency (IAE)[15] and fundamental valuation efficiency (FVE)[16] need to be in place in order for market efficiency to occur according to Tobin (1984). It may however be largely assumed that developed markets demonstrate IAE. The presence of FVE is seriously questioned by the market crashes mentioned above (Singh, 1999, Deakin and Singh, 2008). Kyeyune (2010) suggests that the 2008/9 bank and market crises and subsequent government bailout of US and UK banks confirm the argument above. Kirkpatrick (2009) asserts that corporate governance mechanisms have been assigned the blame for the 2008/9 banking crisis and market failures. These corporate governance mechanisms mirror the significance of the market for corporate control on capital markets. In the case of KPIs, it may be argued that IAE does not exist unless such disclosures are not left for the annual report alone, for instance when KPIs are reported on the company website. FVE may exist and information reporting excellent performance may be thought of as that which secures management in their positions.

In light of the disclosure of KPIs in annual reports, such information is disclosed by the agents to the investors who are expected to decode the information. Under FVE, it is expected that these investors incorporate the KPI disclosures in an accurate and instantaneous manner. Should this happen, then the information is reflected in the share prices which aligns with the strong form market efficiency hypothesis. It would therefore be impossible for market participants to yield

[15] Information should be immediately disseminated and decoded correctly by the market and its participants without bias such that an abnormal arbitrage advantage cannot be made.

[16] Any disclosure made should be correctly and immediately incorporated into the share price of the firm to which the information relates. In such a case abnormal returns should not made.

abnormal returns based on the disclosure of KPI information by managers. On the basis of the discussion above, it may be suggested that IAE and FVE mutually explain the role of disclosures for investment decision making.

4.3 Information Disclosure and Cost of Capital

Companies that are listed on the London Stock exchange for example, would be thought to offer more disclosures in a bid to be competitive in raising funds. They would be competitive on two fronts, firstly by trying to raise as much money as desired and secondly by raising capital at the lowest cost possible. Investment behaviour can be theorized under uncertainty.

Investors view any returns from their securities investments as consequential to their ownership of a business entity. Tauringana (1997) explains that these returns on their investments are perceived as expected values of subjective probability distributions. Investors measure the level of risk involved in their investments through the use of some measures of dispersion in a security's expected returns. The correlation between various other securities therefore measure the level of risk involved. When investors decide to put a stake in a security, they tend to favour a higher expected return for any level of risk or a lower level of risk for any given expected return. Finally, there is a positive relationship between a security's value and its expected returns. The security's value would have a negative relationship with the risk levels associated with the returns.

Where firms increase their disclosures to the capital markets, it is thought that the level of uncertainty in relation to the prospects of the reporting entity is reduced. This action will have the effect of improving the subjective probability distributions of a security's expected returns in the mind of the investors. When uncertainty is

mitigated by extra disclosures, it follows that the level of risk also follows suit. It has been noted in the past that firms that are consistent top performers will constitute the pinnacle of the industry data and general economy data utilised in making judgements with respect to the firm. Choi (1973) therefore suggests that these aspects coax investors to pay more for a firm's securities and in turn this reduces the firm's cost of capital. Horngren (1957) states that analysts will generally follow firms that offer more disclosures compared to those that do not and this consequentially leads to higher price to earnings (PE) ratio due to their favourable attitudes towards such companies. Analysts who are kept well informed also tend to have a dampening effect to startling news about a firm that they closely follow leading to higher stock prices for the relative firm over the long term.

Looking at other studies, it becomes clear that the relationship between information disclosure and costs of capital have a relationship but only subject to other considerations. Botosan (2006) for example suggests that although greater disclosure reduces the costs of capital, further investigation is still required on the assumption that public disclosure mitigates information asymmetry. She suggests that caution needs to be taken on empirical evidence that has used private and public information as complements. In a bid to eliminate concerns such as a small sample size and endogeniety of disclosure from their study, Zhang and Ding (2006) investigated the relationship between information disclosure and costs of capital using data from the Chinese capital market. Apart from using a large sample size, one of the issues they addressed in their study was the fact that the Chinese capital market is a unique institutional arrangement which makes the disclosure exogenous. Their study confirmed a negative relationship between disclosure and cost of capital

which is also exhibited by other academics (e.g. Botosan, 1997, Diamond and Verrecchia, 1991, Botosan, 2006).

Contrary to the studies above, Armstrong et al., (2011) examined when information asymmetry among investors affects the costs of capital over and above standard risk factors. They hypothesised in their study that information asymmetry has a separate effect on a firm's cost of capital only when the markets are imperfect. Armstrong et al., (2011) found that there is a positive relationship between information asymmetry and a firm's cost of capital in excess of standard risk factors in conditions where markets are imperfect. Their overall findings seem to suggest that the market structure or rather the degree of competition has a significant effect on determining the relationship between information asymmetry and the cost of capital.

4.4 Non-Capital Market Based Theories

The section above covered discussions on the theoretical motivations for management of listed companies to disclose information to users of the annual report. The following section considers the disclosure of social[17] and stewardship[18] information by management of companies that are privately owned. It is thought that due to the difference in ownership, the audience of disclosed information is bound to differ in a variety of ways. Section 4.5 therefore discusses the motivations for disclosures of non-capital market related information in the annual reports by the

[17] Social information here refers to annual report disclosures that are of interest to pressure groups and communities at large.

[18] Stewardship information here refers to annual report disclosures regarding financial performance that is primarily directed at the shareholders of the reporting company. This information may however be useful to other users of the annual report as discussed in the previous chapter.

management of privately owned business entities. It is however important to consider that in section 3.5, it was discussed that there are also a lot of similarities between the information needs of private company information with those of public company information. For this reason there are cross linkages, capital market related theories only relate to listed companies but non-capital market related theories relate to both listed and unlisted firms.

Choi and Mueller (1992) argue for the disclosure of non-capital market related disclosures. They suggest that there is an ever expanding need/demand of information from the public at large about company policies and actions. Non-market based theories discussed below explore how information is used to monitor stewardship and the discharging of the social responsibility function by the management of the reporting entity. This information therefore provides better insight into the motives of KPI information and other disclosures. Disclosure of such information will signal of the fulfilment management's responsibilities to information users for instance the general public.

4.4.1 Agency Theory

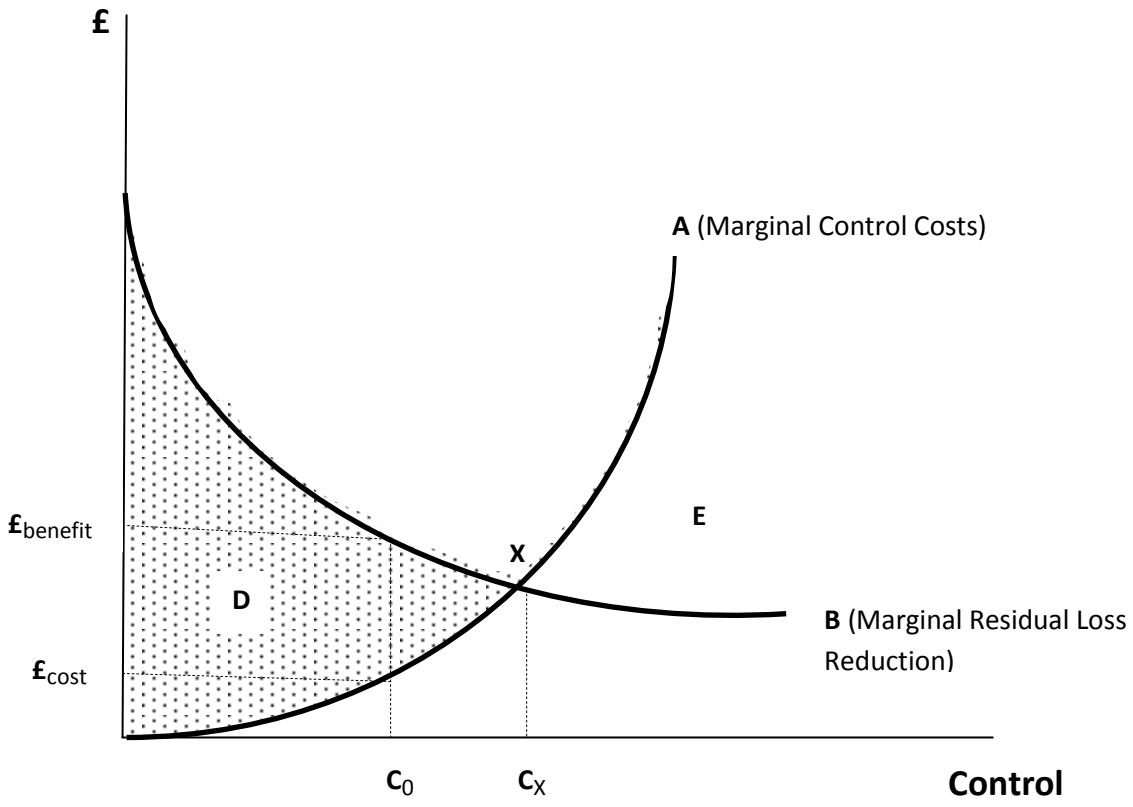
An agency relationship exists between the shareholders (or owners/investors) and/or creditors (as principals) and the management of the company (as agents). There are two different forms of agency relationships. Those between the suppliers of capital (shareholders/investors/creditors) and company managers, shareholder-manager relationships and debt holder-shareholder manager relationships. Miller and Sardais (2011) suggest that under the agency theory; executives in organisations tend to use their superior information as a means to exploit the owners of that

organisation. The exploitation may be alleviated by the effective monitoring and or incentives for those agents/executives.

The agency theory dates back to the work of Berle and Means (1932). Eisenhardt (1989) explains that the agency theory is based on the assumption that individuals are self-interested and boundedly rational. Looking at how the agency theory is defined, it can be seen that there is bound to be conflict between the agents and the owners of organisations. One of the key features of the agency theory is its specification of the costs associated in the relationship between owners and agents. The costs involved may be those of controlling the agents such as bonding and monitoring costs. Other costs include those of failing to control the agents such as residual losses (Jensen and Meckling, 1976). These costs are illustrated in Figure 3. The agency theory hence attempts to find the most efficient manner in governing the principal agent relationship (Letza et al., 2004).

According to the Figure 3, the y-axis and the x-axis measure costs and control respectively. Increased control brings about additional costs as illustrated by Curve A. Additional control also brings about the reduction in residual losses as depicted by Curve B. The Curves A and B therefore represent incremental costs and incremental benefits respectively. According to the Figure 3, Curve A and B intersect at point X; it is at this point that the marginal benefits and marginal costs of control break even. To provide a clearer explanation of the graph, point C_0 is an arbitrary point that has been plotted. At this level (C_0); it may be seen that an additional unit of control ($£_{cost}$) is smaller than the benefit of an additional unit of control ($£_{benefit}$). At this level before point X, additional control may be exerted at extra costs but the benefits will be proportionally larger.

Figure 3: Costs Associated with the Principal-Agent Relationship



Adapted from Dalziel et al. (2011 p.5)

From the graph it may be summarised that before point X; principals who increase their control in their business through additional monitoring, for example better mitigate the risks associated with managerial opportunistic behaviour that may be demonstrated by agents. The level of opportunism continues to dwindle as control increases, however after point X the costs relationship reverses[19]. This

[19] There are several ways in which too much control can be exerted. Some examples include excessive reporting requirements, rigid checks, and too many layers of supervision and over

relationship may be brought about by the fact that too much control can be very costly; however it will be monitoring non-events because the agents will have very little room to exercise opportunism. The area shaded D symbolises the gains to principals that occur when control effectively reduces residual costs prior to the break-even point. The area E represents the losses that the firm might suffer when control is too high (i.e. to the right of point C_X).

The agency relationship described above was defined by Jensen and Meckling (1976) as a relationship in which an individual/s engage others to perform a service on their behalf. The service was thought to involve decision making which would have been delegated by the principals to the agents. Agency theory is concerned with the principal-agent problem in the separation of ownership and control of the firm (Jensen and Meckling, 1976), between different suppliers of capital (Smith and Warner, 1979), and in the separation of risk bearing firms (Fama and Jensen, 1983). Although extensive research on the agency theory was extended by Jensen and Meckling (1976); earlier evidence indicates that Smith (1776, p.700) originally raised the issues that are brought about by the separation of ownership and control. Smith (1776) argued that directors of companies could not possibly exercise the same level of anxiety and vigilance that a principal/owner of the company would exercise. It may be suggested that negligence would prevail to a certain extent in such a setting.

In agreement with Smith (1776); Berle and Means (1932) also echoed similar sentiments regarding the separation of ownership and control. They asked the question, "Have we any justification for assuming that those in control of the modern corporation will choose to operate it in the interests of the owners?" The suggestion in their

---

monitoring of executive compensation. The Controller's Report (2004) and Manzi (2007) for example document some of these in their criticisms of the Sarbanes-Oxley Act.

response was that the level to which agents operate in the interest of the owners depends on the level of their (agents) own self interests. The agents' interests will also be influenced by the political, economic and social power they possess. The conclusion made by Berle and Means (1932, p.132) was that there are bound to be greater differences between the owners interests and those of the stewards of the entity where agents are primarily motivated by pecuniary benefits.

Later studies by Baumol (1959) and Marris (1964) suggested that the financial compensation that managers are awarded is positively proportional to the size of the firm within which they operate. The two studies hypothesized that agents operate firms in such a way that maximise sales growth rates as opposed to profits. Monsen and Downs (1965) developed a theory of large managerial firms in which they offered two main hypothesis to aid their illustration of the agency problem that was brought about by the separation of ownership and control. Firstly, they suggested that principals wish for their business entities to be managed in such a way that provides a steady income flow from dividends and an appreciation of the company stocks on financial markets. They secondly suggested that managers behave or rather act in a way as to maximise their lifetime earnings (Monsen and Downs, 1965, p.225).

Jensen and Meckling (1976) furthered the proposals by Monsen and Downs (1965) on agency theory's managerial utility maximisation. Jensen and Meckling (1976) in their study compared the behaviour of managers based on the level of residual claims on the firms they manage. Precisely they compared those managers with 100% residual claims to when they had sold a fraction of those claims to outsiders. Jensen and Meckling (1976) argue in their study that where owner managers have a 100% stake in the business, operating decisions are attributable to them as opposed to agents. They further suggest that the operating profits accruing from the owner-manager

decisions are likely to be more than those that are attributable to the owner if the firm was managed by agents. It may be suggested that a lack of congruency in motivating factors may lead to this situation. Agents are likely to manage a business but with the view to ensure that their personal interests are met such as prestige, a decent wage, reputation and other benefits among many. Jensen and Meckling (1976) suggest that the decisions made by agents encompass a variety of considerations in terms of benefits to the agents. Such benefits include pecuniary returns and other non-pecuniary returns that are derived from aspects of entrepreneurial activities such as the physical appearance of office and attractiveness of secretarial staff among others. Further Jensen and Meckling (1976, p.312) suggest that, "the optimum mix (in the absence of taxes) of the various pecuniary and non-pecuniary benefits is achieved when the marginal utility derived from an additional dollar of expenditure (measured net of any productive effects) is equal for each non-pecuniary item and equal to the marginal utility derived from an additional dollar of after tax purchasing power (wealth)".

Essentially the argument purported by Jensen and Meckling (1976) is that if an owner manager where to sell their equity claims within their company, agency costs are likely to be generated as a result of a divergence of interests between the new equity holders (outside owners) and those of the agents. Jensen and Meckling (1976) argue that where a manager owns 95% of an entity, they are likely to expend resources to the point where the marginal utility derived from a dollar's expenditure of the firm's resources on such items equals the marginal utility of an additional 95p in general purchasing power (i.e. their share of wealth reduction) and not one pound. Under the agency theory it may be seen that owners and managers are bound to have diverging interests as they have different motivations. This divergence in interests can be mitigated by the use of incentives (such as a healthy compensation), monitoring costs

and bonding costs that are designed to curb the opportunistic behaviour of agents. Bonding costs are incurred not only to deter agents from taking harmful action but also to put measures in place that will ensure appropriate compensation for the agents should they take actions that is harmful to the principal. These costs in relation to the benefits derived are illustrated in Figure 3.

Despite the use of devices to reduce the divergence of interests between ownership and management, they cannot be completely ousted. This continued existence of divergence is probably one the main fuelling factor as to why the agency theory is widely used and in relevance to this research, used in explaining the extent of disclosures in annual reports primarily to stakeholders. Tauringana (1997) suggests that the agency theory has also been used to explain disclosures by firms on their social responsibilities as corporate citizens. Kolk and Pinske (2010) for example stated that corporate social responsibility (CSR) disclosures by multinational companies due their complexity and visibility are important and there is generally a high demand for them to be transparent and disclose information on such issues. Disclosure may be a manner in which information asymmetry may be reduced and resulting in the consequent reduction of monitoring costs. Stakeholders however have different information needs as explained in Chapter 3 and call for greater information demand (e.g. McWilliams and Siegel, 2001) to mitigate agency costs. Annual report disclosures such as KPIs may be perceived as reflective of a management approach that is adoptable to a dynamic and multidimensional business environment. The following sections dissect the agency theory and discuss it from two perspectives namely the shareholder-manager and the debt holder-shareholder-manager perspectives. This approach has been adopted in order to elaborate further on the theory as it is one of the most important considerations in disclosure studies.

4.4.1.1 The Shareholder-Manager Agency Problem

Following the section above, the shareholder manager problem is given a closer look to articulate the two main issues of concern. Berle and Means (1932) in their study suggested agency theorists perceive managers as entities who prioritise pursuing their own interests at the expense of the shareholders and the shareholders' interests depending on the extent of their dispersion (shareholding). Berle and Means (1932) mainly propose an argument that the separation of ownership and control is brought about by the lack of a controlling block of ownership in the company and a trend towards the delegation of the administration of the company to professional managers rather than shareholders. It may be suggested that the separation of ownership and control creates and/or exacerbates the agency problem in two main ways.

First; the expected cost of compensation is bound to be increased simply because managers cannot diversify employment risk as easily as shareholder can diversify investment risk. Managers may therefore exercise greater conservatism due to the greater compensation risk that is borne. The conservatism behaviour may for instance, be exhibited through the nature and choice of projects they choose to partake in order to avoid endangering career security and compensation levels (Mangena, 2004).

Second; information asymmetry may be brought about as the managers familiarise with the business/company. This familiarity may assist the management in disclosing only the information they wish to be known by the shareholders and in turn leaves the shareholders unable to evaluate the extent and quality of the manager's efforts (e.g. Armstrong et al., 2011, Fama and Jensen, 1983, Cormier et

al., 2010). Managers essentially have privileged access to the information concerning company outcomes due to their daily involvement as opposed to shareholders (see Eisenhardt, 1989, Mangena, 2004). Often there is a rift between managers and shareholders particularly on the revelation of negative outcomes. This possibility and speculation of negative outcomes on the part of shareholders often fuels agency costs. It may on the other hand be suggested that the factors mentioned above provide management with a platform to engage in behaviours that may otherwise be contrary to the primary interests of the shareholders.

4.4.1.2 Debt holder-Shareholder-Manager Agency Problem

The advantages of monitoring are dependent on the structure of the firm in addition to the composition of manager and shareholder's financial claims. It has been suggested that assets owned by companies are more likely to be financed by debt (see Myers, 1977, Alves and Martins, 2010, Su, 2010). In this it may then be reasonable to assume that agency problems also exist between debt holders and shareholder-managers (executive directors).

Many authors in the past including Smith & Warner (1979), and Watts & Zimmerman (1986) for example, have expressed that the presence of debt in the capital structure induces shareholder-managers to take actions that tend to reduce the value of the firm. Such actions could be the taking on of high risk capital projects and the issuance of more senior debt with the proceeds being used in the payment of dividends. Issuance of additional senior debt with the view to issue dividends with the proceeds serves to reduce the possibility of having sufficient financial resources to pay off the lower priority debt during phases of financial difficulty. The resultant is a benefit to the shareholder manager (see Mangena, 2004). Healy and Pelapu

(2001) suggested in their study that in the case of high risk capital projects, a good outcome would disproportionately benefit the shareholder-manager while a bad outcome would be disproportionately borne by the debt holders.

The researcher has identified two main platforms which may be used to explain the agency theory. Firstly is the shareholder manager relationship and second, the debtholder-shareholder manager relationship. The agency theory though widely used in the accounting academic arena is not free from criticism.

4.4.1.3 Criticisms of Agency Theory

The agency theory as stated above is a theory that is widely used but is also subject to critics particularly over some of its assumptions. One of those assumptions is that agents will in most circumstances act in their self-interest. Those who criticise this notion suggest that agents are surrounded by too many variables in a dynamic business world that there is very little room for them to exercise their personal interests. The competitive market forces in the business world are believed by many to constrain agents such that they will not always necessarily act in a way to satisfy their wants but in such a way that they execute their duties rightly. Marris (1964) and Jensen & Meckling (1976) for instance have argued that any substantial deviation by the agents from the goal of profit maximisation could result in a decline in the stock price of the business entity they run. As a result of such price declines or underperformance, it is highly likely that the principals of that underperforming business will look to oust the underperforming managers.

Along the same line of thought it may also be suggested that where an entity declines in value, then it will become a takeover target. Such a prospect is against the interest of the management hence they are bound to perform their duties with

reasonable diligence. It is reasonable to assume that takeover threats are bound to stimulate more effective monitoring mechanisms. Hindley (1970) however suggests caution to be taken with actions of that nature. Caution should be taken because effective monitoring of managerial behaviour largely depends on an efficient market for corporate control Hindley (1970). Efficient market of corporate control in this sense would refer to those in which control is not difficult to exert and at the same time where the transaction costs are low relative to the value of a controlling interest. Williamson (1963) in support of the agency theory states that capital transactions are too costly on the capital markets therefore profit maximisation is always a top agenda for agents.

Singh (1971) presented evidence that the market for corporate control is at least partially ineffective. Scherer (1980) conducted research on market control as a monitoring tool for management's opportunistic behaviour. It was concluded through the research that there is very weak support judging by the evidence that take-overs generate effective disciplinary mechanisms against departure from profit maximisation.

Another school of thought suggests that the market for managerial talent is a disciplinary platform for managers (e.g. Alchian, 1968, Alchian and Demsetz, 1972, Fama, 1980). Taking the study by Fama (1980, p.289) for example; it was stated that "the firm is disciplined by competition from other firms, which forces the evolution of devices for effectively monitoring the performance of the entire team and of its individual members. In addition, individual participants in the firm, and in particular its managers, face both the discipline and opportunities provided by the markets for their services, both within and outside the firm". Tauringana (1997) takes a view that was also acknowledged by Fama (1980, p.306) in an earlier study. The view was that the market for manager is an effective mechanism for discipline but it depends on the

extent of managerial compensation for their services to the firm. There is however limited empirical evidence to support this viewpoint.

Tauringana (1997) also points out in his study that the evidence to support his argument that management will act in the best interest of the shareholders only seems to hold water if the management generally have a stake in the company they manage themselves. This ownership of shares by management has been seen as a mechanism that has been more successful in aligning the interest of the management with those of the owners of the entity (principals). Empirical evidence for this line of thought has been demonstrated in some studies that analysed and showed a positive association between stock market reaction and the adoption of long-term managerial plans (e.g. Brickley et al., 1985); short term managerial compensation plans (e.g. Tehranian and Waegelein, 1985) and golden parachute agreements (e.g. Lambert and Larker, 1985).

In the criticism of the agency theory, it is important to go back to the roots of the concept. It is desirable to acknowledge that the theory did not stem from business studies but from legal precepts. The legal precepts seem to suggest that management may not always act in their own interests. This is because agency was originally a legal concept defined as a duo party relationship in which the principal authorised an agent to act on their behalf. Metzger et al., (1986) explain that the principle of agency implied and imposed loyalty duties on the bearer (agent). Clark (1985) described it as a "fiduciary duty of loyalty" which would if treated correctly deter management from an abuse of trust[20]. Duska (1992) reiterates that the agency-principal relationship in commercial ventures was anchored on loyalty and the concept of agency theory simply and logically implies loyalty. Duska (1992) suggests that in the adaptation of the

[20] Abuse of trust in this context refers to situations where the agents behave in a way that is contrary to the interests of the principal.

agency concept to economics is the stage where the notion of loyalty to an extent became obsolete. Economists dropped the view of loyalty in support of the view of the human being as self-interest rational maximize. It has been largely suggested that these facets are exclusive of each other. Duska (1992) does however concede some of the arguments for the agency theory and states that " there is an extent to which Smith (1776) and his followers are right. Human beings are essentially selfish and will not always look out for the interest of others but there are times when they will set aside their own interest and act on behalf of others."

The agency theory has also been criticised in the past because it assumes utility maximisation. The two main reasons put forward in the argument against these assumptions are simply because first, utility maximisation is not a variable that is easily measureable. Second, it is difficult to determine whether individuals are maximising their utility. Davidson and Suppes (1957) argue that the arguments that have been posited are based on unreal situations. They suggest that the literature on agency has been theoretical rather than empirical. In their study (Davidson and Suppes, 1957), they state that " the weight of the evidence under these unreal conditions, most people choose in a way that is reasonably consistent with the axioms of the theory; that is, they behave as though they were maximising the expected value of utility and as though the utilities of the several alternatives can be measured. When these experiments are extended to more realistic choices that are more obviously relevant to real life situations, the difficulties multiply." It may thus be suggested according to the statement above that the real world is so complicated that the theory of utility maximisation has very little relevance to real life choices.

From the arguments it may be seen that the agency theory is applicable to several fields ranging from law, accounting, business and economics among others.

The agency theory is also one that is directly applicable to disclosure studies such as this one. In the case of disclosures, an example is a case in which management are compensated on the basis of the profit reported by the company at the end of the trading period. In such situations according to supports of the agency theory; management will wish to adopt accounting methods that will display the maximum profit levels possible so that their compensation packages for that trading period are bumped. On the other hand for those who criticise the theory and support that loyalty may actually exist, the suggestion is that management may wish to be prudent and disclose less profits but effectively running the business in an organic and sustainable manner on behalf of the principals.

Although the agency theory has attracted vast criticism in accounting and management theory, some scholars have actually posited challenges to these critics. Wiseman et al., (2011) for example make strong criticisms of those academics who argue that the agency theory's value and context is pillared on the premise that agents are egocentric and seek only to maximise their wealth at the expense of the principal. They argue that the flexibility of the theory actually allows for it to be applied across a variety of "non-traditional settings where the key elements of agency theory, such as self-interest, information asymmetry, and the mechanisms used to control agency costs can vary beyond the narrow assumptions implied in traditional agency-based research." Wiseman et al., (2011) therefore suggest that the agency theory can be extended to other diverse settings using a deductive approach. This is thought to be achievable through formal recognition and incorporation of the institutional context surrounding principal agent relationships into agency based models. Wiseman et al., (2011) go on to suggest that once recognition and incorporation is assumed, then it gives academics a platform to extend the agency

theory in a variety of contexts (particularly the social context) as opposed to claiming that it is a narrow streamlined theory which assumes that agents are egocentric. The agency theory is however an on-going and important topic of debate among academics and the arguments cannot be exhausted in one work. The following sections will provide a summary and conclusion to the chapter.

4.4.2 Stakeholder Theory

A stakeholder is "any group or individual who can affect or is affected by the achievement of the firm's objectives" (Freeman, 1984). However Clifton and Amran (2011) define stakeholders as those individuals who have a legitimate claim on the business. Stakeholders may either be internal or external. Internal stakeholders are those with a direct affiliation with the firm for example, employees, management, owners, customers, suppliers and so on. External stakeholders are those individuals or groups that have an indirect affiliation with the business such as the government, local community and the general public. It has been suggested that each of these individuals or groups that form stakeholders may be perceived to be supplying the business entity with critical resources/contributions (see Seuring et al., 2008, Laplume et al., 2008). It was suggested (Hardwick and Letza, 1999) that the stakeholder theory does not attempt to place an order of importance to a company's various stakeholders, they are however perceived as of premier importance in terms of maximising shareholder wealth. The stakeholders expect their interests to be satisfied in return. A practical example is for a shareholder to provide a firm with capital and in return expect the risk adjusted return on their investment.

Other stakeholders include creditors who provide financing to firms that seek funding. In return creditors will require loans to be paid back on maturing normally

at a premium. Employees and managers offer the firm with their physical and human capital commitments, they also offer their time. In return, employees and management anticipate adequate compensation and working conditions. Customers who are among the internal stakeholders of business entities provide them with revenues and expect good quality products and value for money in their purchases. Suppliers provide inputs and expect a fair deal in the form of competitive prices for the inputs they provide businesses. External stakeholders include the local community and the government for example; they provide firms with locations to set up enterprise, local infrastructure and favourable tax treatments. In return these groups anticipate businesses that set up as decent corporate citizens; they also expect the business entities to enhance the communities and the quality of life in the area.

The stakeholder theory was pioneered by Ansoff (1965). He suggested that companies tried to balance the conflicting demands of the various stakeholders as their major goal. Letza et al. (2008) in a later study further point out that the theory assumes that while stakeholder interests have to be joint, it is the management's responsibility to provide guidance for stakeholder relationships ensuring as much value as possible is created for the stakeholders. On the other hand, an organisation's continued existence requires the support of its stakeholder's hence their approval must be sought. It has been suggest that organisations adjust their activities in order to attain this approval (Liu and Anbumozhi, 2009).

It may be seen that companies try to meet the needs of their various information users through disclosures in annual reports. Due to the wide ranging of stakeholders, it is expected that companies disclose a wide range of information to try and meet the needs of these various stakeholders as discussed in greater detail in Chapter 3. Companies in their reports tend to disclose information covering several

facets, for example social disclosures, environmental disclosures, financial disclosures, intellectual property disclosures and KPI disclosures. The information disclosed by companies, assists stakeholders in assessing various aspects about the company, for example effectiveness, efficiency of the management, corporate citizenship, adherence to regulation, performance, position and future prospects of the firm among other issues.

4.4.3 Legitimacy Theory

Legitimacy theory also assists in explaining the motivations for disclosures. This theory asserts that corporate disclosures react to economic, social and political factors. These disclosures are perceived as a response to legitimise their actions (Cho and Patten, 2007, Tilling and Tilt, 2010, Guidry and Patten, 2012). The legitimacy theory is based on the foundation that businesses operate in society through a social contract. These social contracts bind it to perform its business objectives in a socially desirable manner and in return get approval in the fulfilment of its agendas to ultimately ensure its going concern. Riverte (2009) argues that any societal institution, businesses included; operates through social contracts of one form or another, whether implied or expressed.

Shocker and Seithi (1974) are in agreement, but in their earlier paper further suggest that there is no permanent fixture with regards both sources of institutional power and the needs for its services. The legitimacy theory in this case hence assumes that the firm in question will have to satisfy two aspects of the theory. The first is that the business entity will need to demonstrate that there are societal needs for the services it provides. Secondly it will need to demonstrate that the groups or individuals that are stakeholders to the company have the society's approval of its

business activities. Companies that make disclosures such as KPI, CSR and environmental disclosures will assist in ensuring the continued survival of the reporting entity. The legitimacy system does not revolve around the social usefulness of the entrepreneur; but rather the entrepreneur is channelled into socially useful activities as a result of competitive forces in the system that form a social control tool (Abbott and Monsen, 1979, Russo and Perrini, 2010).

4.4.4 Stewardship Theory

This theory dates back to the 1950s and stems from branches of organisational sociology and psychology. Mclleland (1961) and Herzberg et al. (1959) explain that under the stewardship theory, firstly managers are seen to be individuals motivated by the need to achieve. Second, they are also seen to be individuals who gain a lot off inner satisfaction through successful performance of challenging tasks. Finally, managers are generally seen as individuals who would consequentially gain recognition from their peers and bosses through exercising responsibility and authority in their duties. Letza and Sun (2002) state that "managers have a wide range of motives beyond a simple self-interest, such as achievement, recognition and responsibility needs, the intrinsic satisfaction and pleasure of successful performance, respect for authority, social status, and work ethics. Thus, the separation of ownership from control does not inherently lead to a goal and interest conflict between shareholders and managers." In support of this notion, Barney and Hesterly (2010) in defining the theory explain that, under the stewardship theory, if managers were left to their own, they would act as responsible stewards/caretakers of the assets they control. They argue that the main difference with the agency theory as argued earlier is that under agency, managers are assumed to act in their own self-interest at the expense of the owners of the business entity.

When managers have served a corporation for relatively lengthy periods of time, they tend to identify themselves with those corporations. They also feel that they have played essential roles in shaping the form and direction that the firm takes. Their key roles under stewardship is thought to yield within them a blend of self-esteem combined with corporate prestige. Under the stewardship theory, even where managers feel that there is very little personal reward in embarking on certain corporate tasks, they will most likely carry out the tasks with a sense of duty, that is, normatively induced compliance (Etzioni, 1975, Abeysekera, 2010, Matoussi and Chakroun, 2008). The stewardship theory takes the stance that motivation is not a problem within organisations; managers are therefore not opportunistic shirkers but wish to perform the duties at hand as good caretakers of corporate assets. One may view managers under the stewardship theory as "corporate concierges". As with most things, there are limits; one wonders how far managers are willing to go in order to fulfil their corporate responsibilities.

One of the issues that are perceived to be a determinant of management performance is the organisational structure within which they operate. Donaldson (1985) states that some organisational structures promote management's autonomy while others are restrictive; this will have an impact on organisational performance. Different structures in different organisations determine the extent of autonomy, level of authority, role expectations and code of conduct among other restricts. Such frameworks have different levels of impact depending on the work ethic and style of the stewards of that organisation. It is more likely under the theory that management with total freedom will exhibit superior performance and this may have an impact on what information they disclose among their KPIs in the annual report.

4.4.5 Theory of Constraints

Goldratt (1990) developed the theory of constraints (TOC) as an overall philosophy in management. The TOC recognises that in attaining goals, there are always restrictions that cause friction in the attainment of those goals. Rahman (1998, p.337) suggested that the TOC can be summarised in two criteria. Firstly, in that every system will have at least one constraint. Rahman (1998) supports their argument by suggesting that if constraints were absent then every organisation would make unlimited profit from their operations. Goldratt, (1988, p.453) defines constraints as "anything that limits a system from achieving higher performance versus its goal". The second criteria suggested by Rahman (1998) in summarising the TOC was that the existence of constraints present organisations with opportunities to improve. However it is through lifting of these constraints that organisations see improvement.

In relation to KPIs, several constraints can be identified in the selection, preparation, measurement and disclosure of KPIs in annual reports. Rahman (1998) suggested that every system has at least one constraint. KPIs on one hand measure the critical success factors of the organisation. Under the TOC relative to KPIs it may be suggested that one of the key issues is that too many things are measureable. The management needs to choose what items to report in their annual report as key to the organisations success. Several steps can be taken to lift the constraints that lead to difficulty in the identification and reporting of KPIs. Management may choose to place limitations on the count of items to be identified as KPIs, management may wish to identify what items are deemed within the industry to companies operating within that industry, and the items that drive the success of the company may also be identified. These performance drivers are the information items that would

constitute material facts in accounting language. It may be suggested that while constraints may be viewed as positives, one needs to identify them as exemplified for KPIs. It is only with that kind of information that one may lift these constraints and achieve the intended organisational goals.

4.4.6 Political Costs Theory

Disclosures among UK companies may be explained in terms of the political costs theory. Political costs are wealth-redistributions to the government and the wider economy from the business entity (Lopes and Rodrigues, 2007, Reverte, 2009, Dal-Ri Murcia and dos Santos, 2012). Theories surrounding political costs seem to take the view that politicians maximise their own utility. Watts and Zimmerman (1978) carried out significant research in the area of political costs and assert that the political sector has power to effect wealth transfers among various groups. The corporate sector is vulnerable to these wealth redistributions according to Watts and Zimmerman (1978). Lobby groups often have incentives to vote against the actions of business entities that act against the will of the corporate society and the public at large. It has been suggested that collective actions may be taken to lobby for the nationalism, expropriation, break up or regulation of an industry or corporation (Stigler, 1971, Georgiou, 2005).

Companies however, have a variety of tools that they may utilise in order to mitigate political costs against their business entity. Actions that may be taken by corporations include social responsibility campaigns in the media, government lobbying and selections of accounting procedures to minimise reported earnings. Reporting of minimised earnings for example, reduce the level of attention drawn to high earning corporations. Such corporations are generally perceived as monopolies

by the public. Management therefore can anticipate and reduce the political costs associated with the nature of the company that they run. An example of a political cost is that which is imposed by labour unions through increased disclosures to high earning business entities.

Abbott and Monsen (1979) argue that the general public and government regulatory agencies pressurise companies to disclose social responsibility information. In their study, they conducted surveys and found that public confidence in business declined 51% in the 1960s and 35% in the 1970s. This view by the public is thought to have come about from the basis that businesses were seen to be failing to fulfil their specialised roles in the society through legitimate means. Abbott and Monsen (1979) therefore suggest that corporate responsibility disclosures for instance, are a tool implemented by businesses in a bid to counter the public perception that business actions are illegitimate. Epstein et al. (1976) in a study in the US noted that the SEC was exerting pressure on companies to report on social responsibility. During the time of Epstein et al's., (1976) study, they witnessed this increase in pressure and could foresee eventual requirements to report on social disclosures.

The same situation might be likened to that of the UK with regards the requirement to report on KPIs. In the UK, the Companies Act (2006) requires corporations to disclose their KPIs in their business review (BR) has led to increased KPI disclosures.

4.5 Summary and Conclusion

As this research is about key performance indicator disclosures, the purpose of this chapter was to consider and discuss the motivation of management for disclosing

information about their companies in the annual report. This study is investigating both public listed companies and private limited companies; therefore the theoretical framework covered in this chapter discusses both the capital market based and the non-capital market based theories.

Under capital market based theories, four models were discussed and these included the signalling theory, capital needs theory, management talent signalling theory and the efficient market hypothesis. Just to summarise one of the models for example. Under the signalling theory it was discussed that management may wish to signal to the capital market about the state of their company. When management believe that the shares of their company are undervalued, they may disclose information about their company in the annual report revealing their trading results and future prospects for instance. The disclosure of such information would likely assist investors in making a fair assessment of the actual state of affairs with the company therefore revaluing their shares and making the stock values appreciate. Through signalling by disclosures, companies may therefore reduce the information risk associated with the shares of that company. Other things being equal it may be also found that investors may require a lower rate of return. Tauringana (1997) suggests that although widely accepted, it has never been empirically proved that information disclosure lowers the risk levels that the company is susceptible to.

The non-capital market based theories that were covered in this chapter include the stakeholder theory, legitimacy theory, stewardship theory, theory of constraints, political costs theory and the agency theory. The agency theory for instance, explained that agents are viewed as caretakers of the business on behalf of a principal. Agency costs however arise due to the separation of ownership and control between the principals and agents. Proponents of the theory suggest that agents are often disloyal

and pursue their self-interest during the course of running the business. Critics of the theory suggest that the theory is streamlined and does not take into account the diverse context of the business environment as well as the social context of the principal agent relationship. It was argued in the chapter that annual reports are an important means of helping to reduce the agency problem by providing information that is necessary and timely for continuous monitoring of management activities. Other matters that were discussed in this chapter covered information disclosure versus the cost of capital and market reaction to the release of annual reports.

Chapter 5

Hypotheses Development

5 Hypotheses Development

5.1 Introduction

This research is about the extent of KPIs disclosure and in addition about the relationship between disclosures and other corporate governance and company specific characteristics. After having discussed in chapters 2 and 4 respectively about the existing literature and the theoretical framework, it can be seen that there is no single theory to explain disclosure (see van der Laan, 2009, Reverte, 2009, Nurunnabi and Hossain, 2012). This chapter is thus concerned with the development of hypotheses relating to the association of the extent of KPIs disclosure with corporate governance mechanisms (proportion of non-executive directors, audit committee size, board meetings, financial expertise, board size and director share ownership) and company specific characteristics (company size, gearing, profit ratio, liquidity ratio, multinationality, listing status and multiple listing status).

Zimmerman (1987) suggested that research must be based on a model to direct the researcher to those facts that are considered important to collect and report on. It is important to apply a theoretical framework because theoretical structures facilitate in organising the researcher's assessment. They provide a systematic channel to understanding the study while avoiding an over reliance on intuition (1992). Applying a theoretical framework to the research question assists in sharpening the focus of the enquiry (Baiman, 1990).

The number of variables that have been considered for this chapter have been guided through literature in order to avoid subduing the statistical significance of the model (e.g. Field, 2009, Lorek and Willinger, 1996). The recommendations taken from literature primarily focus on the relationship between the number of variables

and the sample size to be considered in the regression model[21]. Lorek and Willinger (1996) suggest that too few or too many independent variables may lead to a weak predictive performance of the model employed. Having considered the literature in the area, a decision was made to consider only those variables that were understood to be the most important ones (Wang and Claiborne, 2008). Another recommendation adopted in this KPIs disclosures study is that every variable included in the model should have an independent contribution to ensure a high predictive power of the model employed (see for example Donnelly and Mulcahy, 2008, Cramer, 1972). It may further be suggested that when variables possess individuality, then the risk of multicollinearity is also reduced. These were however assumptions made by the researcher based on analyses of previous studies as the importance of variables can only be determined after testing the hypotheses developed.

The hypotheses formulated in this chapter relate to both private limited and public listed companies. The rationale behind disclosures between the two sets of companies is similar in many cases with some exceptions. Market related motivations for disclosure are not relevant to private limited companies as they enable the markets to reflect a fair price for the relevant company's stocks. Other differences are recognised in the case of corporate governance mechanisms where private companies have notably smaller boards compared to public listed companies therefore the explanatory power of the proportion of non-executive directors and board size for instance may be restricted.

[21] Discussed in detail in Chapter 6 (Data and Methodology).

The remainder of the chapter is organised as follows. The next section 5.2 briefly addresses corporate governance as the disclosure category for the proceeding independent variables. Under that, sections 5.2.1 to 5.2.6 discuss the variables proportion of non-executive directors; audit committee size, board meetings, financial expertise, board size and director share ownership independent variables respectively. The next category covered is company specific characteristics in section 5.3. Company size, gearing, profit ratio, liquidity ratio, multinationality, listing status and multiple listing independent variables are explored in sections 5.3.1 to 5.3.7 respectively.

5.2 Corporate Governance Mechanisms

Corporate governance factors and their relationship with the extent of disclosures have been studied for a while now. They are thought to be instrumental in reducing agency problems between managers and shareholders as discussed in the previous chapter[22] (see Barako, 2004, Bathala and Rao, 1995, Baysinger and Hoskisson, 1990). Aripin et al. (2008) suggest in their study that corporate governance mechanisms are essential tools in the moderation of the self-serving activities and intentions of agents. Taking the UK as an example, the Financial Reporting Council (FRC) has set out a UK Corporate Governance Code which outlines corporate governance guidance which is binding to companies within the FTSE 350 category. Corporate governance is a global phenomenon both within practice and research, Australia for example, recommends through the Australian Stock Exchange Corporate Governance Council[23] that all Australian companies that

[22] Chapter 4: Theoretical Framework

[23] Australian Stock Exchange, ASX henceforth.

are listed on the main stock exchange should adopt[24] key governance attributes. Such recommendations were put forward with the view that governance mechanisms may have the effect of reducing the magnitude of the problems that arise due to the separation of ownership and control as suggested by Jensen and Meckling (1976).

For the purpose of this study, the strength of corporate governance is measured by five mechanisms as aforementioned: (1) proportion of non-executive directors (Tauringana and Mangena, 2009, e.g. Aripin et al., 2008), (2) audit committee size (e.g. Cormier et al., 2010), (3) board meetings (e.g. Laksmana, 2008b), (4) financial expertise[25] (e.g. Kelton and Yang, 2008) and (5) board size (Cormier et al., 2011). The studies analysed in this hypotheses development cover several disclosure types, however they have been chosen because they have been found to be relevant in the argument for the disclosure of KPIs in the annual report. One of the reasons that make some of the disclosure findings below relevant is due to the analogous nature of the various groups of users of financial reporting information, a topic discussed in grander detail in Chapter 3.

5.2.1 Proportion of Non-Executive Directors

Corporate governance mechanisms have become of more importance in disclosure studies, in that light, the role of non-executive directors has become more apparent in studies due to their function in company conduct. The task of such

[24] Upon adaptation it is required by the ASX listing rules that these governance attributes are disclosed in the annual reports of the relevant companies. There is however a "comply or explain" clause similar to that held by The UK Corporate Governance Code (2010) whereby any deviance from the recommendations must be explained.

[25] The finance experts proxy in this study is measured as the percentage of experts on the board and not just those on the audit committee as in Kelton and Yang (2008).

directors is usually advisory as delineated in the Cadbury Report, (1992, Section 2.1). Part of the report stresses the requirement for non-executive directors to bring independent judgement to bear on issues of strategy, performance, resources, including key appointments, and standards of conduct. Tauringana (1997) suggested that non-executive directors bring wider business knowledge to the company such as better ideas and current best practice they possibly will have acquired while conducting duties for other companies. From this perspective it may be suggested that a large proportion of individuals who possess these attributes will contribute to an increased extent of disclosure in the annual reports of the relevant companies because they will have a greater influence on the directorship board as a whole.

Tauringana and Mangena (2009) on the UK media sector found that there was a significant negative association between the proportion of non-executive directors and the extent of KPI disclosures (at the 5% level or better). Their findings were contrary to their predicted positive association. One of the possibilities they suggested would explain the results was that the measure used for the variable did not differentiate between independent and non-independent non-executive directors. In a situation where a company has a high level of non-independent non-executive directors, the non-executive directors can be expected to be influenced by managers and therefore in the long run fail to encourage KPI reporting in the annual report.

Some studies (Zourarakis, 2009, Barako et al., 2006a) suggest that the presence of non-executive directors on the board is a vital element in addressing the issues that are brought about by the agency problem. The suggestion here is therefore that a higher proportion on non-executive directors on the board can be reasonably thought to be an influencing factor of increased disclosures. He et al. (2008, p.28) in their study "…conclude that board independence is the most effective

deterrent of fraudulent financial reporting." In support of this argument, a previous study by Beasley (1996) pointed that among firms that were found committing financial statement fraud, the percentage of non-executive directors in such firms was smaller. The firms that were never found to have committed financial statement fraud were those with, on average, a larger percentage of non-executive directors.

Cheng and Courtenay (2006) find a significant and positive association between the percentage of independent board members and voluntary disclosure in a Singapore study. However these results contradicted an earlier study in the same country. Eng and Mak (2003) from their study found that the percentage of outside directors was negatively associated with the level of voluntary disclosure by firms trading on the Singapore Exchange (SGX). It is however important to note that Eng and Mak (2003) do not differentiate between grey[26] and independent[27] directors. Felo (2009) suggests that board independence and audit committee independence seem to have a similar influence on disclosure decisions. Ultimately it is the management that make the final decisions on the levels of disclosure in the annual report, however it may be seen from the studies discussed above that board independence evidenced by empirical results is associated with the extent of disclosures.

Chen and Jaggi (2000) investigated the relationship between independent directors and corporate disclosure. They found that a higher proportion of independent directors positively and significantly influence the level of corporate disclosures. This relationship is expected because the directors in question are generally independent of the day to day operations of the firm (Patelli and Prencipe,

[26] Refers to non-independent non-executive directors.

[27] Refers to independent non-executive directors.

2007). Independent directors may also naturally be expected to be more inquisitive than executive directors. When they attain information, there is a reasonable likelihood that they will wish to relay it to the stakeholders of the firm due to their alternate perspective of information asymmetry compared to executive directors. Independent board members are an important tool for checking and enhancing the effectiveness of the board of directors as a group (Haniffa and Cooke, 2002, Fama and Jensen, 1983, Eng and Mak, 2003, Pettigrew and Mcnulty, 1995).

The reasons for increased disclosures in the annual reports may appear to be stronger for public listed companies than for privately owned companies primarily due to a larger shareholder base for the former. The underlying influences for the disclosure of KPIs for example, would be similar in both cases because they cover a vast majority of shareholder groups despite ownership structure. Similar groups that are reported to may range from local government, the public, customers and employees among many. On the basis of the above discussions, the following hypotheses were formulated:

H^{1a}: *The proportion of non-executive directors is a positive determinant of the extent of KPI disclosures in annual reports of large UK private limited companies.*

H^{1b}: *The proportion of non-executive directors is a positive determinant of the extent of KPI disclosures in annual reports of large UK public listed companies.*

H^{1c}: *The proportion of non-executive directors is positive determinant of the extent of KPI disclosures in annual reports of the pooled companies.*

5.2.2 Audit Committee Size

According to the Financial Reporting Council (2008), first-rate corporate governance should contribute to better company performance by assisting the board of directors in a manner that is of best interest to their shareholders. Vulnerability and poor performance are a consequence of the board of directors not executing their job to the best of their ability. The combined code also emphasises that good governance should facilitate efficient, effective and entrepreneurial management that can deliver shareholder value over the longer term.

Under the same category of corporate government mechanisms; the audit committee is another important variable for monitoring managerial opportunism. Audit committees act as overseers for the directorship boards on matters of corporate governance and financial reporting among their main roles. In this role, the audit committee monitors management and both the internal and external auditors in order to protect the interests of the company's shareholders (Cadbury Report, 1992, DeZoort, 1997, Ho and Wong, 2001c). The investors are therefore alerted of internal activities through additional disclosures that will establish a sense of security as some may view the audit committee as a body that scrutinises or rather assesses the management's accountability.

Forker (1992) also argued that the existence of an audit committee may improve internal control and is regarded as an effective monitoring device for improving not only the quantity but the quality of disclosures. Although he posited a significant positive association with disclosure quality, his results suggested that the relationship was weak. In a Hong Kong study, Ho and Wong (2001) found similar results to Forker (1992), which suggested that the relationship between the presence of an audit committee and the extent of disclosures was weak.

From an agency theory perspective, members of the audit committee ensure transparency by internal auditors, external auditors and management among other responsibilities. When the various levels of management perform their jobs properly, they subsequently look after investors' interests; the presence of an audit committee member ensures that these roles are conducted to a high level of competency. The presence of a larger audit committee size may better protect shareholder interests. Where there is a larger committee there is a stronger likelihood that such boards will disseminate an increased level of information that would influence stakeholders in making their decisions. Presence of an audit committee may also reduce the likelihood of the board withholding undesirable financial reporting information.

It may be suggested that a larger audit committee is more persuasive to the management to expose the risks that the company is facing. Such a situation is also a remedy for the future in terms of avoiding the embarrassment of disclosing such information which may depict the management as of inferior competence to users of annual report information. This improved situation would be reflected in the share price and in the long run avoid company collapse such as in the Enron corporation scandal revealed in October 2001. Transparency brought about by the presence of an audit committee promotes long term confidence in corporate governance and reporting.

One issue that was however noted is that the majority of the studies that produced empirical results on audit committee size were based on public listed companies. Private limited companies have also been noted to have smaller boards and in some cases only one or two members only. As a result, the existence of an audit committee in private limited companies is thought to have a minimal influence

on the disclosure of KPIs. On the basis of the above considerations on audit committees, the following hypotheses were formulated:

H^{2a}: Audit committee size is a positive determinant of the extent of KPI disclosures in the annual reports of private limited companies.

H^{2b}: Audit committee size is a positive determinant of the extent of KPI disclosures in the annual reports of large UK public listed companies.

H^{2c}: Audit committee size is a positive determinant of the extent of KPI disclosures in the annual reports of the pooled set of companies.

5.2.3 Board Meetings

The number of board meetings held during the year is another measure of the effectiveness of the board. The frequency of the meetings held during the trading period provides a reflection of the level of the diligence and vigilance of the board in carrying their monitoring duties according to Persons (2006). Khanchel (2007) also points out that meeting frequency is an element of strong corporate governance and is consistent with the agency theory. Vafeas (1999) points out that if a firm is efficient in setting frequent board meetings then it will likely attain economies in agency costs. Frequent board meetings therefore illustrate how active the board is. A more active board is thought to act as an effective monitoring mechanism in mitigating agency conflicts (Xie et al., 2003). In line with the earlier discussions in section 4.4.1 of this thesis, Nelson et al., (2010) point out that where monitoring is increased then there is a reduction in information asymmetry and agency costs,

thereby increasing disclosures. It is reasonable for boards to increase the level of meeting frequency when there are situations that require significant supervision and control (Shivdasani and Zenner, 2004).

Conger et al., (1998b) suggests that frequent board meetings would enhance board effectiveness hence, its ability to address stakeholders interests which, in turn, may positively affect disclosure decisions. Other authors have pointed out that frequent board meetings result in better communication and sharing of information among the company directors (Shivdasani and Zenner, 2004). Better communication through increased meeting frequency would allow for a better distribution of workloads as well as board committee assignments. Such situations are thought to lead to increased transparency and more effective board decisions (Laksmana, 2008a, Aburaya, 2012). Laksmana (2008a) argues that board meeting frequency is associated with the quality of disclosures. Aburaya (2012) suggests that boards that meet more frequently have the ability to devote more time to issues such as social and environmental responsibility. There is a possibility that where boards have fewer meetings then they are likely to be less effective. The situation of having fewer meetings reduce the ability of boards to build their collective strength (Demb and Neubauer, 1992).

Kent and Stewart (2008) found that the quantity of disclosure was positively associated with the frequency of board meetings. When a board of directors have a meeting, they assess their corporate governance commitments, with emphasis on ensuring quality governance and transparency in reporting in the annual report. It has been suggested in many studies that boards which meet frequently are more likely to perform their duties more diligently and effectively and in turn enhancing

their level of oversight (Lipton and Lorsch, 1992, Conger et al., 1998a, Vafeas, 1999, Yatim et al., 2006)

Van den Berghe and Levrau (2004) highlight in their study that there is a need for better understanding of all elements that determine board effectiveness including board meetings. It has been reported that a board having more time to meet leads to increased transparency (Laksmana, 2008a). Their study indicated that board meeting frequency is positively and significantly associated with the extent of voluntary disclosure of compensation practices. However there are some studies that have investigated the impact of board meeting frequency and did not find a significant relationship (Cormier et al., 2010). Nelson et al. (2010) also found that there was no significant association between board meetings and the nature and extent of statutory executive stock option disclosures by Australian listed companies. Based on the analysis above it may be concluded that board meeting frequency increases the level of monitoring. Increased monitoring enhances the effectiveness of corporate boards and in turn promoting transparency, consequently reducing information asymmetry. It can also be concluded that higher meeting frequency has an impact and allows for more time to be devoted to disclosures such as KPIs and CSR among others. Frequency of board meetings within both private and public listed companies is likely to have the same effect on the levels of disclosures in the annual reports of the relevant companies. The following hypotheses were thus been formulated:

H^{3a}: The frequency of board meetings positively and significantly influences the extent of KPI disclosures in the annual reports of large UK private limited companies.

H^{3b}: The frequency of board meetings positively and significantly influences the extent of KPI disclosures in the annual reports of large UK public listed companies.

H^{3c}: The frequency of board meetings positively and significantly influences the extent of KPI disclosures in annual reports of the pooled set of companies.

5.2.4 Financial Expertise

Prior studies have found that capital markets react positively to the appointment of non-executive directors with financial expertise particularly to the audit committees (e.g. DeFond et al., 2005). Such findings suggest that finance expertise on the audit committee is perceived by the market as enhancing the quantity and quality of disclosures in annual reports, the same argument would hold for having finance experts on the board of directors in general.

Some research revealed that audit committee finance expertise can positively explain the extent of information disclosure (e.g. Mangena and Pike, 2005). The finding may suggest that audit committee financial expertise is effective in alleviating the problem of information asymmetry. Other studies assessed finance expertise in audit committees and reported a negative relationship with financial fraud (Abbott et al., 2000), earnings management and earnings restatement (Klein, 2002). It may be suggested that only independent directors with financial expertise are related to more transparent disclosures. Gray directors with accounting expertise are related to less transparent disclosures in company annual reports.

In the UK, the Corporate Governance Code 2010 states that it is important that boards include a mix of industry, financial, and risk management experts. In the

US it is a prerequisite for firms to have at least one financial expert on the audit committee if they are to be listed on the New York Stock Exchange (NYSE) and the National Association of Securities Dealers Automated Quotations (NASDAQ). This requirement clearly suggests that financial experts are likely to address the relevant and appropriate questions to the management and identify mishaps concerning the firm's financial reporting not only in the UK but abroad too. This will also have a bearing on financial reporting when there are more financial experts on the executive board. Several researchers (Felo, 2009, Abbott et al., 2004, Bédard et al., 2004, Davidson et al., 2004, DeFond et al., 2005, Krishnan and Visvanathan, 2007, Chan and Li, 2008) have backed this notion. It may be further suggested that the board of directors are very instrumental in the construction of the financial report hence it is important to have finance experts on the executive board. Finance experts on the audit committee and on the board of directors may be perceived as backers of disclosure transparency.

This ideology may be supported by the findings of DeFond et al. (2005) who assert that there is a positive stock market reaction to the appointment of outside financial experts to the board. This reaction may be down to the fact that financial experts will be more diligent and efficient at addressing those issues that affect stakeholder returns. According to the signalling theory (as per discussions in Chapter 4), when such issues are addressed, companies will wish to disclose their better positions in the annual report (Orens et al., 2009).

Felo (2009) found that there is a significant and positive association between financial experts and the level of disclosure transparency. Building on these findings it may be suggested that where there are finance experts on the board, transparency might also entail that the board disclose more information in order to paint a true and

fair picture of the state of the business in the annual report. In this context transparency might also be explained as a system in which the management of the firm withhold less information to the stakeholders. It is hence reasonable to expect a positive correlation between the number of finance experts and the extent of KPI disclosures in annual reports. The following hypotheses were thus developed:

H^{4a}: The proportion of financial experts is a positive determinant of the disclosure of KPIs in annual reports of large UK private limited companies.

H^{4b}: The proportion of financial experts is a positive determinant of the disclosure of KPIs in annual reports of large UK public listed companies.

H^{4c}: The proportion of financial experts is a positive determinant of the disclosure of KPIs in annual reports of the pooled set of companies.

5.2.5 Board Size

Cornier et al. (2009) observed a weak relationship between board size and the extent of governance disclosure in a Canadian study. Their findings suggested that governance disclosure may serve as a complement of a firm's governance mechanisms in reducing stock market asymmetry. The other reason suggested for the weak relationship in this Canadian study was that legal protection of investors is very high in Canada. Any disclosure about corporate governance for example, will be perceived by investors as credible therefore the anticipation of complementarities between governance disclosure and information asymmetry.

The general direction of the relationship between board size and the extent of disclosure is unclear. Some studies have found a positive relationship between the board size and firm performance (Chiang and Lin, 2007, Haniffa and Hudaib, 2006) and some have found a positive relationship with board monitoring (Anderson et al., 2004, Williams et al., 2005) and others a relationship with the directors' ability to monitor and control managers (Lipton and Lorsch, 1992, Jensen, 1993). On the other hand some studies have indicated that smaller boards are better and more efficient at disseminating their duties (Lipton and Lorsch, 1992, Jensen, 1993, Beasley, 1996).

A larger number on the board of directors has in the past been argued to help in the mitigation of information asymmetry (Chen and Jaggi, 2000). Even older studies in the 80's have suggested that a larger board of directors is thought to reduce uncertainty and withholding of information (Birnbaum, 1984). Although Zahra et al., (2000) suggest that smaller boards of directors are bound to process information about the performance of managers more efficiently. According to this argument it may be suggested that smaller boards may perhaps be more efficient at scrutinising and assessing company situations and in turn result in lesser disclosures. The thoroughness of smaller boards may be thought of as reduced than larger boards where more ideas would probably be floated around. It may also be suggested that larger boards are bound to hold a higher meeting frequency to assure congruency as there is a higher mix of diverse backgrounds in a larger board population.

As argued above it may then be further suggested that the consequent meeting frequency will result in increased disclosures. On the other hand, in this line of thought, it falls that larger boards would be more vigorous at scrutinising company situations. This is because larger boards may likely consist of several individuals

from different backgrounds who would bring a diversity of skills. They would also more likely address areas that they are specialist in. Such a setting would result in a bigger push for disclosures to a diverse shareholder base in both the cases of private and public listed companies. Mohamed et al. (2009) add to this argument by suggesting in their study that as a board increases in size, their collective experience and expertise also increases resulting in the need for information disclosure to be higher. On the basis of the above arguments, the following hypotheses were formulated:

H^{5a}: Board size positively and significantly influences the extent of KPI disclosures in annual reports of large UK private limited companies.

H^{5b}: Board size positively and significantly influences the extent of KPI disclosures in annual reports of large UK public listed companies.

H^{5c}: Board size positively and significantly influences the extent of KPI disclosures in annual reports of the pooled set of companies.

5.2.6 Director Share Ownership

Smith et al. (2005) posited that the power of stakeholders to influence management is a function of the resources they control and these resources are crucial to the company. It therefore makes sense to suggest that ownership structure is influential to the level of monitoring and consequently, the disclosure levels as proposed by Eng and Mak (2003) in their study on corporate governance and disclosures. There are several factors that may be suggested for the variation in

results regarding the association of director share ownership with disclosures, some of the main ones being differences in the research context, socio-economic and political environments (García-Meca and Sánchez-Ballesta, 2010). Cormier et al. (2005) and Lakhal (2005) for instance found a negative and significant association between director ownership and disclosure. On the other hand, Eng & Mak (2003) and Craswell & Taylor (1992) did not find any significant association.

Jensen and Meckling (1976) suggested that a higher level of ownership by the board of directors tends to cause them to have the same interests as shareholders thus inclining them to protect shareholder interests. The result is a reduction in a conflict of interests between the board and the shareholders, and in turn a reduction in the agency costs (Leftwich et al., 1981). It is logical to assume that board members with higher levels of shareholding within a firm may be associated with higher levels of participation in company operations (Wright, 1996). This phenomenon threatens the monitoring quality and is detrimental to the quality of financial reporting.

Forker (1992) and Kosnik (1990) suggest that the board may tend to reduce their motivation to favour shareholders' interests over their own and in the long run may not pressurise managers as much as they should do to disclose higher levels of information in the financial reports. The provision of additional information from the management to shareholders about directors' decisions reduces agency costs (Craswell and Taylor, 1992, Eng and Mak, 2003, Pernilla et al., 2010). The general idea proposed is that the marginal benefit to individual shareholders of obtaining the same information is less than the marginal cost for the same stakeholder group obtaining that data. The increased director share ownership thus increases the marginal benefit gained from additional information disclosed and inversely reduces the marginal cost as posited by Jensen and Meckling (1976).

Healy and Pelapu (2001) suggest that directors are likely to push for a higher amount of disclosure when they own shares in an entity in order to meet restrictions imposed by insider trading regulation and also to increase the liquidity of the company's stocks. Insider trading restrictions also incentivise managers to make further disclosures to correct any perceived undervaluation before the expiration of stock option awards. Increased levels of director share ownership may most likely lead to the board aiming to protect their shares. However, the direction of the hypothesised relationship is tentative. This occurrence will lead to a two tailed argument that the board, as they are the preparers of the annual report may (i), increase disclosure to reassure investors of future prospects such as during seasonal dips in performance which will later be ironed out or (ii), reduce the level of disclosures which are detrimental to the share price of that firm.

It can be suggested that the predicted relationship between director ownership and the extent of disclosure is negative because the conflict between shareholders and directors increases as directors' share ownership decreases. Based on the discussion above it is difficult to predict the direction of the relationship between director share ownership and disclosure. Cornier et al. (2005) suggest that firms with closely-held ownership[28] are expected to have less information asymmetry between management and dominant shareholders (Cormier et al., 2005). Such shareholders can be expected to have access to the information they need. One may therefore suggest that this governance system is the opposite of what can be expected in large public listed companies in which it is difficult for smaller, more passive investors to

[28] Such as private limited companies in this case.

attain information hence rely on disclosures. On the basis of the above discussion, it has been hypothesised that:

H^{6a}: Director share ownership negatively and significantly influences the extent of KPI disclosures in the annual reports of large UK private limited companies.

H^{6b}: Director share ownership positively and significantly influences the extent of KPI disclosures in the annual reports of large UK public listed companies.

H^{6c}: Director share ownership positively and significantly influences the extent of KPI disclosures in the annual reports of the pooled set of companies.

5.3 Company Specific Characteristics

5.3.1 Company Size

It has been suggested under the legitimacy theory that larger companies use increased disclosures to respond to social expectations because they have more stakeholders than in smaller companies (Suttipun and Stanton, 2012). Studies analysing company size as an explanatory variable for disclosure started as early as 1961 by Cerf and several other studies followed thereafter such as Buzby (1975), Cooke (1989a), Wallace et al., (1994a); Depoers (2000), Watson et al., (2002a) and Tauringana & Mangena (2009) among many. Watson et al. (2002c) suggested that large companies are more likely to disclose more ratios compared to smaller companies. Their study was based in the UK. While still on the subject of UK studies, Brammer and Pavelin's (2006) results revealed that larger firm were more likely to make voluntary environmental disclosures. In a Kenyan study, Barako et al.

(2006b) found that the size of companies was one of the main factors influencing the level of disclosures made by the reporting entity.

This research therefore also predicts that company size will be significantly associated with disclosure of KPIs in the annual reports. Firms protect their competitive advantage by increased disclosure as opposed to the case for smaller firms (Wei-ping, 2008). Larger firms are expected to make more disclosures than smaller ones. The process of gathering analysing and publishing information can be quite costly hence it is those firms that are larger that are expected to disclose more information as they are expected to have more resources. Larger firms find it cheaper to accumulate information due to their larger revenue (Hossain, 2008, Jean-François and Marc, 2008, Angeloantonio and Francesco, 2010). Larger firms can put up with the marginal costs of extra disclosure.

On the same note it has also been argued that it is the larger firms who are more likely to afford to employ the expertise of accounting practitioners and thus more likely disclose more information than small companies (Watson et al., 2002a). Large companies require sophisticated management information systems because of their complexity and they often operate multi product chains over a large geographical expanse across international borders. It is the management information systems that are employed to meet the needs for managerial control as well as the needs of creditors (Buzby, 1975, Cooke, 1989a, Cooke, 1991). This phenomena is important to reporting because the speed of reporting is vital if the information is to be of any value to investors (Atrill, 1986, ASB, 1997). A sufficient quantity of information is required to be disclosed for investors to fully appreciate the operations of the company.

The political costs theory suggests that large business entities are susceptible to political attacks, the like of societal demands for greater regulation by means of higher corporate taxation levels, nationalisation and price controls among many (Reverte, 2009). Large companies are therefore sensitive to political costs and try to curb the likely consequences by disclosing more information (Firth, 1979). On the contrary the opposite has been argued on the basis that if companies disclose high profit margins for example, then the government may wish to intervene by imposing higher taxation tariffs. On this basis, it has been posited by some (Wallace et al., 1994a) that the relationship between size and disclosure is in fact negative.

Jensen and Meckling (1976) posited that agency costs increase in parallel to outside capital and further Leftwich et al. (1981) and Cooke (1989a) suggest that the proportion of outside capital tends to increase with company size. Larger companies' management find that greater disclosure is more beneficial for example, in the case of raising capital (Aripin et al., 2008). Jensen & Meckling (1976) offer their support to this argument through reaffirming that larger companies have a higher proportion of outside capital and higher agency costs.

The potential benefits from shareholder-debt holder manager contracting would also increase with firm and information size. Larger companies may tend to be stable and profitable on average, they are also likely to be of more investor interest than smaller companies in terms of information dissemination. Large companies are also thought to face greater information demand from financial analysts and the financial press as suggested by Barry & Brown (1986) and Schipper (1991).

Smaller companies may believe more strongly than larger companies that more disclosure could endanger their competitive position as their simplex

operations may easily be duplicated by stronger entrants into the market and take over their market share (Singhvi and Desai, 1971b, Meek et al., 1995a, Raffournier, 1995). As a result there is a reasonable expectation that larger companies have a tendency of disclosing more information than what a smaller firm would. Dye (1985) in a similar fashion offers a conceptual analysis of why managers may choose to withhold information, arguing that information may be perceived as proprietary and that disclosure of such information may result in the entrance of competitors into the market, consequently driving profits down. Zourarakis (2009) suggests that larger companies partake in more activities than smaller ones. The suggestion in the study is that such larger companies have more information to report to external parties with the aim of reducing agency costs.

A positive association between company size and the level of disclosures has also been found in several intellectual capital disclosure studies (Bozzolan et al., 2003, Bozzolan et al., 2006, Guthrie et al., 2006, García-Meca et al., 2005, Oliveira et al., 2006, Petty and Cuganesan, 2005). Petty and Cuganesan (2005, p.47) for example; support the same argument posited by (e.g. Singhvi and Desai, 1971b); they suggest that the cost of gathering and preparing detailed information can be reasonably expected to be lower for larger companies with superior resources and expertise as aforementioned. It may also be suggested that larger companies are more visible and are therefore required to offer more attention in their communication with stakeholders. Large companies are generally more susceptible to adverse reactions from a wide range of stakeholders therefore it is important for them to be vigilant with their disclosures.

Generally, there are several studies that confirm the association between size and disclosures from across the globe. Examples include (Singhvi and Desai, 1971a,

Buzby, 1975) in the USA; (Watson et al., 2002c) in the UK; (Chow and Wong-Boren, 1987) in Mexico; (Cooke, 1989b) in Sweden; (Wallace et al., 1994b) in Spain; (Ho and Wong, 2001a) in Hong Kong; (Hossain et al., 1994a) in New Zealand, there are many others that have not been covered here as it would be difficult to exhaust the list. Brammer and Pavelin (Brammer and Pavelin, 2004) argue that larger companies tend to be spread over larger geographical territories compared to smaller ones. For this reason, it is reasonable that the stakeholders groups are equally as diverse and consequently their information needs. Increased reporting may be seen as an effective method of building and maintaining good reputation and relationships. In a study of ICD, Branco et al., (Branco et al., 2011) found that company size had a significant positive association with ICD in annual reports which was consistent with their hypothesis and other previous studies (Bozzolan et al., 2003, Bozzolan et al., 2006, García-Meca et al., 2005, Oliveira et al., 2006, Petty and Cuganesan, 2005) as discussed above. Based on the discussions on the influence of company size, it was hypothesized that:

H^{7a}: Company size positively and significantly influences the extent KPI disclosures in the annual reports of large UK private limited companies.

H^{7b}: Company size positively and significantly influences the extent KPI disclosures in the annual reports of large UK public listed companies.

H^{7c}: Company size positively and significantly influences the extent KPI disclosures in the annual reports of the pooled set of companies.

5.3.2 Gearing

Gearing describes a company's financial structure and measures the long-term risk implied by that structure (Wallace et al., 1994a, Wallace and Naser, 1995). Gearing is the measure of financial leverage, demonstrating the degree to which a firm's activities are founded by owners' funds versus creditors' funds. It has been posited by many studies (Fama and Miller, 1972, Jensen and Meckling, 1976, Smith and Warner, 1979, Mangena, 2004, Tauringana and Mangena, 2009, Aljifri and Hussainey, 2007) that firms with higher levels of debt incur higher agency costs. It may be suggested that an effective manner in which to reduce agency costs is to increase the level of disclosure. Many (Watts, 1977, Holthausen, 1981, Leftwich et al., 1981, Chow, 1982) have argued that when wealth transfers from debt holders to shareholders, the gearing levels increase. The logic stems from the fact that when debt-holders start price protecting themselves, shareholders and managers are incentivised to increase the levels of monitoring, such as through disclosing more information in their annual reports.

Agency theory predicts a positive association between financial leverage and financial disclosure. Many academics (Jensen and Meckling, 1976, Watts, 1977, Chow, 1982, Watts and Zimmerman, 1986) have suggested agency problems associated with gearing are likely to increase as the proportion of the company's capital contributed by debt holders increases. In the presence of debt, managers are incentivised to disclose information or investment policies that will increase the share value of the relevant company such as the issuance of additional debt and the funds utilised in the payment of dividends (Smith and Warner, 1979, Watts and Zimmerman, 1986). However the end result is likely to increase agency costs in the form of a higher cost of debt (Kelly, 1983, Watts and Zimmerman, 1986).

Stakeholder and stewardship theories are used in part to explain gearing against the extent of disclosure. It is logical to assume that companies with higher gearing levels have a higher number of creditors. From that perspective; firms would disclose more information to these stakeholders, in other words, the companies have a duty of accountability. Stewardship is therefore when those companies disclose how any money advanced to them was utilised.

On the whole, results on the association of gearing and disclosure extent are inconclusive. Some studies have found a significant positive relationship (Belkaoui and Kahl, 1978, Malone et al., 1993, Aljifri and Hussainey, 2007, Zourarakis, 2009), while others have found no significant relationship (Chow and Wong-Boren, 1987, Wallace et al., 1994a, Wallace and Naser, 1995, Hossain et al., 1995, Raffournier, 1995) and some have found a negative relationship (Bradbury, 1991, Tan and Tower, 1997, Schadewlitz and Blevins, 1998). On the balance of the two tailed argument, the following hypothesis was thus formulated:

H^{8a}: *Gearing positively and significantly influences the disclosure of KPIs in annual reports of large UK private limited companies.*

H^{8b}: *Gearing positively and significantly influences the disclosure of KPIs in annual reports of large UK public listed companies.*

H^{8c}: *Gearing positively and significantly influences the disclosure of KPIs in annual reports of the pooled set of companies.*

5.3.3 Profitability

Information asymmetry may exist between two parties in the transaction process consequently resulting in adverse selection (Song, 2012). The signalling theory asserts that companies would disclose more information to distinguish their superior financial performance from companies exhibiting poor operating results (Nurunnabi and Hossain, 2012). It may be suggested that highly profitable firms may be perceived as of sound governance. The level of profitability is an important determinant of the extent of disclosures in annual reports. As earlier mentioned that those firms that are less desirable to take up investment within are dubbed lemons (Akerlof, 1970). According to the signalling theory; those firms that have higher profit levels are expected to disclose more information in a bid to distinguish themselves from other underperforming entities and simultaneously this information will be reflected in the share prices of listed firms.

In the case of private limited firms, there are other models that reflect the good performance of the company such as the Times Top Track 250. Highly profitable private limited firms will appear on this list and this signals a strong message to potential investors and debt holders among other stakeholders. Through employing the agency theory (as discussed in Chapter 4), it can be argued that managers of very profitable companies will disclose detailed information in order to support the continuance of their positions and compensation arrangements (see Barako et al., 2006a, Zourarakis, 2009, Inchausti, 1997). This would apply to both private and public listed entities as covered by this research. Singhvi and Desai (1971b) suggest that if a company's profit margin is higher than average, then management are likely to disclose more information in order to assure shareholders about their strong financial position.

Profit margin signals the company's capacity to absorb rising costs therefore a higher profit ratio parallels a higher propensity of absorbance according to Buzby (1975). In such situations, Buzby (1975) posited that the management of such a firm will disclose information that reveals the firms capacity to cushion any damage that might arise as a consequence of the spiral on costs, this would in turn provide assurance on long term performance in both privately and publicly owned companies.

A company that has a low profit margin is likely to try and disguise that fact by providing less in the way of disclosures in the annual report. The opposite for this situation is also true i.e. where a company has high profit margins; they are likely to disclose more information to make their strong position apparent to stakeholders. On the same note some high profit ratio firms tend to disclose more information in a bid to self-regulate, i.e. to justify their profit ratio and avoid any regulatory intervention that stifles their strong position and even to assure consumers that they are not being overcharged (Ng and Koh, 1994).

On the contrary, some academics have suggested a negative relationship between profit ratio and the extent of disclosure, for example Chen et al. (2002) state that in the event of losses stakeholders will notice the change in disclosure pattern and it may have a devastating effect on the firm’s prospects of securing investment. Hayn (1995) and Collins et al. (1997) also suggest that investors assume that loss making companies cannot be sustained for a prolonged period and they price their shares accordingly. However what could possibly happen according to the signalling theory perspective is that such firms may disclose even more information in their annual reports to reassure investors that they are not heading for liquidation or rather their losses are temporal as is the case reported by Wallace and Naser (1995) on

Hong Kong companies when they suggested that they view such disclosures as their part of accountability to stakeholders under the agency theory. On the balance of the above arguments, the following hypothesis was formulated:

H^{9a}: Profit ratio positively and significantly influences the extent of KPI disclosures in annual reports of large UK private limited companies.

H^{9b}: Profit ratio positively and significantly influences the extent of KPI disclosures in annual reports of large UK public listed companies.

H^{9c}: Profit ratio positively and significantly influences the extent of KPI disclosures in annual reports of the pooled set of companies.

5.3.4 Liquidity Ratio

Liquidity ratio expresses a company's ability to repay short-term creditors out of its total cash. Its association with the extent of disclosure has been examined in a number of studies (Belkaoui and Kahl, 1978, Wallace et al., 1994a, Tauringana, 1997). It is the management's intention to inform creditors of the utilisation of their resources and inform short term creditors that they will receive their money back in good time/when due. According to Wallace and Naser (1995), regulatory bodies as well as investors and lenders are particularly concerned with the going concern status of the companies they invest within.

Belkaoui and Kahl (1978) investigated company characteristics and the depth of disclosures in a Canadian study. They suggested that companies that have a high liquidity ratio are expected to disclose more information in their annual reports about

their position for the simple fact that they are sound, have nothing to hide and would like to reassure their short term creditors. This argument is one that holds for both privately and publicly owned companies as the main stakeholders of liquidity information are largely similar between the two groups of companies.

Wallace et al. (1994a) suggest the contrary stating that if liquidity is perceived in the market as a measure of performance, a company with a low liquidity ratio may have an incentive to disclose more information to explain its weak performance than a company with a high liquidity ratio. Wallace et al., (1994a) based this assumption on that a problem of low liquidity may be a temporal one as is the case for seasonal businesses.

Tauringana (1997) disagrees with this notion and suggests that firms with low liquidity may wish to disclose less information about their situation for the fear that their creditors may demand their money. In the same fashion, companies with low liquidity may tend to shy away from that fact in their annual report for the purpose of jeopardising their prospects of securing short term credit in the future.

Gathering from the debate, high liquidity and low disclosure may trigger management disapproval from investors due to under-utilisation of liquid resources, for this reason management may offer more disclosure in a bid to justify their company's high liquidity position. It may be suggested that companies may disclose more information if they are in positions of high liquidity. The following hypotheses were formulated:

H^{10a}: Liquidity ratio significantly and positively influences the disclosure extent of KPIs in the annual reports of large UK private limited companies.

H^{10b}: Liquidity ratio significantly and positively influences the disclosure extent of KPIs in the annual reports of large UK public listed companies.

H^{10c}: Liquidity ratio significantly and positively influences the disclosure extent of KPIs in the annual reports of the pooled set of companies.

5.3.5 Multinationality

It may be suggested that disclosing information about a geographical segment (multinationality[29]) is limited by the existence of relevant costs as confirmed by professional and academic literature (see Tauringana and Mangena, 2009, Barako et al., 2006a, Zourarakis, 2009, Oliveira et al., 2006). Consideration should be placed on the costs of preparing and disseminating segment information. Segment reporting is a complex operation because of a number of technical issues that are vital such as transfer prices, segment definition and overhead allocation among many.

The nature of the problem has however been recognised for instance in the United States where the Financial Accounting Standards Board (FASB) issued a standard that provides for a detailed disclosure framework (Gray, 1978). In the same study by Gray (1978), he found that 95% of the largest EEC multinationals which operated in at least 2-3 countries, provided an additonal segmental reporting section in their annual reports hence increased disclosure. When companies operate in other countries, they are bound by the regulation within those foreign countries. The regulations may be relevant to the particular industry, size of enterprise and/or foreign entrants among many possibilities of binding restriction. It may be suggested

[29] As defined in Chapter 2, multinationality in this study refers to companies that have substantial operations outside GB.

that due to these additional regulations, firms operating in other geographical segments present additional disclosures in their annual report.

Locals may also wish to invest in such companies and due to the dispersion of investors; monitoring costs may increase as a consequence of agency cost increments via the dispersion of investors particularly in the case of publicly owned companies. The higher monitoring costs may be alleviated by increased disclosures as afore mentioned. Other stakeholder groups such as the local government and local community, customers, employees, creditors etc., are also likely to demand further disclosures from FDIs[30] in the case of both privately and publicly owned companies.

Lopes and Rodrigues (2007) suggest that more internationalised companies will attempt to demonstrate to their stakeholders that they are a good company therefore make increased disclosures. They further state that even when such multinational corporations are not listed they attempt to show good levels of disclosure in their annual reports. Companies that go multinational are bound to face new demands for information beyond those faced in the home country (Meek et al., 1995a). Okike (1998) reinforces this argument by highlighting that standards issued by organisations such as IFAC and IASC have a direct impact on the level of disclosure. She therefore finds that multinationality is a determinant of increased disclosure. In another study in the same year, Craig and Diga (1998) suggest that companies with a presence in the international market are likely to increase their level of disclosures. It may be suggested that the drive for increased disclosure due to multinationality is a consequence of the need to raise capital at the lowest possible cost (capital-need hypothesis). Lopes and Rodrigues (2007) further suggest that

[30] Foreign Direct Investment

when users of accounting information read the annual reports of companies with multinational operations, they often expect them to follow similar formats to reports of companies operating within that country only, as a result of this expectation; firms with multinational operations tend to disclose increased information to suit local information user requirements. The multinational companies are at the same time expected to adhere to the usual reporting practices of their home countries. On the basis of the above discussion, the following hypotheses were formulated:

H^{11a}: Multinationality is a positive determinant of the disclosure of KPIs in the annual reports of large UK privately owned companies.

H^{11b}: Multinationality is a positive determinant of the disclosure of KPIs in the annual reports large UK publicly owned companies.

H^{11c}: Multinationality is a positive determinant of the disclosure of KPIs in the annual reports of the pooled set of companies.

5.3.6 Listing Status

Many studies (Chow and Wong-Boren, 1987, Depoers, 2000) have suggested that listed companies are likely to provide a greater amount of disclosure in their annual reports compared to the non-listed companies. All companies are bound by certain regulation regarding the level of financial reporting disclosures. The reason why listed companies would disclose more information than unlisted companies is that listed firms are subject to further stock exchange regulations that go beyond the generic regulations such as the Companies Act 2006 and accounting standards (Firth,

1979). Firth (1979) further explains that the provision of additional information for instance, according to the LSE rules stimulates activity with the relevant companies' equity stocks to give more confidence to investors and prospective investors.

An argument posited by Cooke (1989a) in his empirical study on disclosures by Swedish companies was that there is a relationship between listing status and disclosure. In the study he argues that agency costs spiral when there is a divorce between ownership and control, listed companies have in general a higher number of shareholders compared to private companies thus agency costs are expected to be higher. There is a likelihood that agents will use superior information which they have more access to in comparison with their principals, to their (agents') advantage. They will use this information to their advantage because it is difficult for principals to monitor the behaviour of the management based on the limited information they have access to. It is logical to expect listed companies to disclose more information than unlisted companies as the former are expected to have higher agency costs due to the higher number of shareholders. As companies aim to reduce these agency costs, and given that disclosure assists in reducing agency costs then listed companies are expected to disclose more information in their annual reports.

Finally, in cases of perceived undervaluation of company equity stocks on the LSE for example, insider trading rules incentivise management to make further disclosures before the expiration of stock option awards. This action will signal to investors about the company's favourable prospects than the then current market perceptions. Management believe that additional disclosures assist companies in hedging against the risks that make it difficult for investors to differentiate whether poor performance is down to poor market conditions or poor management. Such

disclosures have an impact on the relative company's cost of capital by reducing it. On the basis of the above arguments, the following hypotheses were developed:

H^{12}: Stock exchange listing status is a positive determinant of the extent of KPI disclosures in annual reports of the pooled set of companies.

5.3.7 Multiple Listing

Following on from the arguments posited in the section 5.3.6 above, Cooke, (1989a) and Gray et al. (1995), among others, suggested that multiple listed companies are more likely to have higher levels of disclosure than those companies which are only listed on the domestic stock exchange/country of registration. First, the need for companies to raise capital (at the lowest possible cost) on international capital markets leads to higher disclosure according to the capital needs hypothesis (Choi, 1973, Spero, 1979, Welker, 1995a, Sengupta, 1998, Botosan, 1997). When a company operates or rather is listed in the stock exchange of another country (i.e. other than its domestic stock exchange), the local investors are likely to have limited knowledge of that particular company hence would logically have higher information requirements in order to make their investment decisions regarding buying, holding and/or selling shares even more so in cases of multiple listing.

Increased levels of disclosure in the annual report by multiple listed firms would therefore help in cushioning uncertainty among investors. Cooke (1989a) suggests that such a situation where investors are receiving increased levels of disclosure will stimulate a healthy demand for a company's shares and in turn the market will portray a share price that is reflective of intrinsic value of the company. It may also be suggested that in such a scenario, a multiple listed entity is likely to

receive higher proceeds at a lower cost of capital in the case IPOs[31], rights issues and additional share issues.

The second reason is associated with agency costs (i.e. monitoring problems) which are likely to be higher (Chow and Wong-Boren, 1987, Depoers, 2000). Due to the dispersion of shareholding unlike a domestic listed only firm, it would make sense to suggest that monitoring costs would be higher and disclosure would alleviate the moral hazard problem as suggested by Schipper, (1981) and Cooke, (1989a).

Finally, stock exchanges have their own set of rules that companies listed on it should abide by. It falls that a firm with multiple listing will therefore be required to go by an increased set of rules and in turn increased levels of disclosure requirements. Choi (1973), Meek & Gray (1989) and Cooke (1989a, 1991, 1992) also support this argument that companies that are listed on both a foreign stock exchange and domestic stock exchange may need to observe the disclosure rules of two or more stock exchanges thus forcing them to make increased disclosures. A point to note however is that this assumption of disclosure increments parallel to the quantity of stock exchanges a firm is listed on does not always hold. There are cases where a company has multiple listing status but where international listings/stock exchanges have less stringent disclosure regulations than the domestic stock exchange (Saudagaran and Biddle, 1992). The assumption is therefore based on the premise that foreign stock exchanges will have more extensive disclosure rules, and if the opposite is true then there should not be dissimilarity in the level of disclosure.

[31] Initial public offering.

The extent of disclosure is only expected to increase where any additional stock exchange listing rules require more disclosures than the domestic stock exchange.

Different techniques in disclosures studies have however yielded different results following empirical studies on the association of multiple listing status with disclosures. Cooke, (1989a, 1991), Hossain et al., (1994b), Meek et al., (1995a), Hossain et al., (1995), Depoers, (2000) found a significant association using multivariate analysis but not while using univariate analysis, as in Tauringana's (1997) UK study. On the balance however it has been hypothesised that:

H^{13}: *Multiple listing is a positive determinant of the extent of KPI disclosures in annual reports of the pooled set of companies.*

5.4 Summary and Concluding Remarks

This chapter developed testable hypotheses which will form the foundation of the methodology and empirical analysis to be described in the chapters to follow. Part of the purpose of this chapter was to build on the discussions from the previous chapters on the literature review and theoretical framework for the study. The independent variables identified will be tested in order to determine their association with the extent of KPI disclosures in annual reports. The hypotheses developed concern corporate governance mechanisms (proportion of non-executive directors, audit committee size, frequency of board meetings, financial expertise, board size and director share ownership) and company characteristics (company size, gearing, profit ratio, liquidity ratio, multinationality, listing status and multiple listing). Notably the inclusion of performance ratios in the hypotheses development was due the ASB's (2006b) recommendation of considering complementary and

supplementary information to accounting documentation which aids investors and other stakeholders in their understanding and decision making.

The hypotheses discussed in this chapter were developed through a mix of logical deductions and interpolations from accounting theory particularly the signalling and agency theories. Several reasons were provided on the basis of the arguments posited for the direction (positive or negative) of expectation in terms of significant association of the independent variables with the extent of KPI disclosures in the annual reports. The hypotheses 1-11 that have been developed cover large UK private limited companies, large UK public listed companies and the pooled set of companies. Hypotheses 12 and 13 are restricted to large UK public listed companies only as they are specifically streamlined for companies that have an affiliation with stock exchanges.

Chapter 6

Data and Research Methodology

6 Data and Research Methodology

6.1 Introduction

This chapter aims to provide an overview of how the data for the research was selected and collected. The latter part of the chapter explains the manner in which the data was manipulated in order to reach the concluding remarks. Previous studies such as Ahmed and Courtis (1999), Beattie et. al., (2004b), Barako et. al., (2006a) and Tauringana & Mangena (2009) were analysed in order to assert several items such as (1) the optimum sample size to draw reasonable conclusions, (2) what variables are to be used to assess their relation to the disclosure of KPIs and (3) what selection methods were used by previous researchers. The points above are however just a few of other considerations; such as whether to use a weighted index or not as argued by Cooke (1989a) that information is of different importance to different users and a decision on how the independent variables are to be operationalized needs to be made.

The chapter is organised as follows; Section 6.2 explains the study sample. This section describes how the sample of companies was selected. Sections 6.3 and 6.4 cover a background to disclosure measurement and then focus on the disclosure index techniques employed. The theoretical justification of using the disclosure index is covered in section 6.5. The manner in which the annual reports were scored is discussed in section 6.6 followed by section 6.7 which looks at the methods of estimating the dependent variables. The operationalizing of the independent variables is covered in section 6.8. Sections 6.9 and 6.10 provide a background to hypotheses testing and the choice of statistical tests respectively. The chapter then closes with a summary and some concluding remarks in section 6.11.

6.2 The Study Sample

6.2.1 Selection of Companies

It is impractical to scrutinize all likely subjects in an experiment. There is need to draft up a sample from which inferences will be drawn. The results are then applied to the general populace. Previous research posits that inferences based on a sample may be fairly precise because a well-selected sample may accurately reflect the characteristics of the population (e.g. Nachmias and Nachmias, 1976, Qu, 2011).

In this study, the cross section for the empirical analysis is a sample of 410 companies. 205 of these are large private limited UK companies and the other 205 are large UK public listed companies of which information about them was drawn from their 2008 annual reports. The first stage of the sampling process involved drawing up two lists of the largest UK private limited firms and the largest UK public listed companies. The company lists were extracted from two main sources namely the London Stock Exchange (LSE) FTSE 350[32] list of statistics for 2008 and the Sunday Times Top Track 100 and Top Track 250[33]. All the companies that fell under the industrial benchmark classification (ICB) 8000[34] were eliminated. Both lists were then entered into Microsoft Excel and the random sampling tool was used to select 205 companies from each category (large private limited and large public listed companies).

[32] The list of public listed companies was compiled from this list.

[33] The list of private limited entities was compiled from the two Sunday Top Track lists.

[34] This benchmark represents financial services securities such as banks and insurance firms. They are subject to industry specific disclosure requirements that do not apply to the other companies from the remaining industries included in this research.

Five private limited companies were further eliminated and replaced for not filing their Annual reports with the Companies House for the required period. All of the annual reports for public listed companies were acquired from the relevant company website and Northcote Data[35] except for three where a request was emailed and they were sent in the post within one week. As for the annual reports for private limited companies; fifteen reports were acquired from the companies' various websites. Email requests were then sent to the individual companies requesting their 2008 annual reports and nine attached their report in an email, fourteen were sent in the post after the email request and seven were sent through the post after a telephone request.

The remaining 160 annual reports required for the research pertaining private limited companies were purchased from the Companies House at an average cost of £1 per document[36]. It took approximately three weeks to acquire all the annual reports intended for the study. During the scoring process, eight public listed company annual reports and two private limited company annual reports were further eliminated and replaced due to provision of insufficient information for the study for example where information about, director share ownership, board meeting frequency and financial experts on the board were missing. The total sample summed up to 410 annual reports (205 private limited companies and 205 public listed companies) which were used for the pooled companies' analysis.

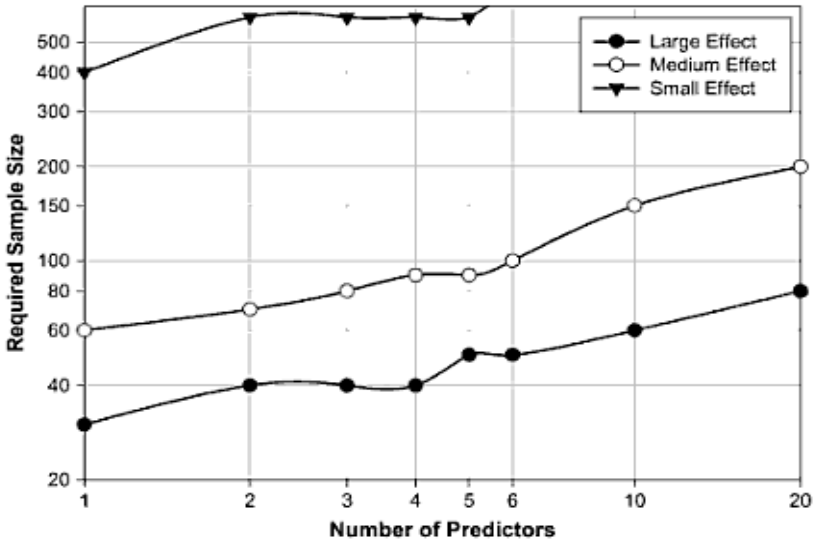
[35] Northcote Data (www.northcote.co.uk) is an online research tool that provides company information namely Financial Reports, Webcasts and Press Releases.

[36] For some companies, the reports spanned over 2 or 3 documents which all cost £1 per such required document.

6.2.2 Justification of the sample

One of the main considerations to be made was on choosing the appropriate proportion of predictors to the sample size. An extensive amount of literature was considered for example Figure 4.

Figure 4: Number of Predictors to Sample Size in Regression



Field, A. (2009 p.223)

The above guide may appear to oversimplify the quandary but the important matter taken into consideration is that the sample size required actually depends on how well the predictors calculate the outcome and how much statistical power is desired in order to detect the effects (Field, 2009). The above graph is however also very important because it takes into consideration previous research conducted (Cohen, 1988, Miles and Shevlin, 2004) on the sample sizes required to achieve different levels of power desired to detect these effects and how strong the relationship that is being measured is. For the purpose of this research, the medium effect is desired as there is a fairly large sample.

The effect is of medium size because there are other variables that may affect disclosures such as a change in management structure but are outside the scope of this particular research. It is impossible to cover every possibility hence a realistic and reasonable approach has been adopted. According to this research a total of thirteen predictors have been used for the public listed and private limited company samples. Taking the case of public listed companies for example (205 entities), Figure 4 would depict that thirteen predictors would entail that the model employed would be in closest proximity to the line depicting the medium effect.

Rules of thumb are ubiquitous in regression studies and the most common that has been taken into account for the purpose of this study is a recommendation by Babyak (2004). He stated that "for linear models, such as multiple regressions, a minimum of 10 to 15 observations per predictor variable will generally allow good estimates." He however does not state any upper limits. This study however is well within the remits of this recommendation as in all three cases (private limited companies sample, public listed companies sample and pooled companies sample); the minimum ratio of 10-15 observations per predictor has been met.

6.3 Theoretical Justification of the Disclosure Index

This study aims to assess the nature and extent of KPI disclosures in the annual reports of large UK private limited and public listed companies. Beattie et el. (2004b) and Weber (1985) assert that a disclosure profile needs to serve the purpose for which it is designed. Financial disclosures are an abstract concept and there is thus difficulty in measuring them directly; however in support of the earlier mentioned argument, disclosures can be measured in accordance with how well they fulfil their purpose(Wallace and Naser, 1995). Beattie et al. (2004a) suggested that it

is feasible to inference disclosure scores based on their usefulness to investors. Elliott and Jacobson (1994b) conceptualised that the main audience for narrative disclosures in company reports are investors since the information embedded in them enhances their knowledge for the purpose of investment decision making. It has however been argued before that there is no one correct framework that is agreed upon to conceptualise, articulate and collect empirical evidence about the reporting practices of companies particularly through interim and annual reports Gray and Haslam (1990).

KPIs in annual reports capture short-term seasonal, random, scheduled, cyclic and mostly recurring financial and non-financial fluctuations in company performance. Based on these different roles of KPIs, the selection of a particular form of external reporting for the annual report relies on its level to aid the investor future results as suggested by Green (1964). A replication of the internal performance monitoring framework was employed as recommended by Boesso and Kumar (2007) because of its effectiveness in day-to-day running of the business. Such a framework does not only illustrate the performance of the organisation based on functional aspects of the business but also allows for easy navigation through the narratives. In the same way disclosures of KPIs in annual reports are centred in the BR section of annual reports and offer users easy navigation through the information which allows them to assess performance based on functional clustering.

6.4 Scoring of Annual Reports

Upon gathering the annual reports for this study, the first stage was to measure the extent of disclosure as in previous studies (see for example Brüggen et al., 2009, Alvarez, 2011, Andrikopoulos and Kriklani, 2012b). This was achieved by

scoring KPI disclosure levels against the constructed index. The disclosure index was constructed on the assumption that annual reports are useful to many users. As a result, the items included in the disclosure index were wide ranging and not confined to a specific user group as tried and tested in previous research (Abdul Halim and Baxter, 2010, Clarkson et al., 2008, Gamerschlag et al., 2011, Guidry and Patten, 2012). Upon reviewing previous studies (Cooke, 1991, Wallace et al., 1994a, Lopes and Rodrigues, 2007, Hassan et al., 2011b), it was decided not to attach weights to the items of disclosure in order to take into account their usefulness to different user groups because there usually is no difference between weighted and unweighted disclosure indexes (Spero, 1979, Mangena and Pike, 2005).

Upon constructing the disclosure index, other independent variable items of disclosure were recorded from the annual reports. The first category of independent variables collected was corporate governance mechanisms[37] then followed by company specific characteristics[38]. For all the information categories, the data was extracted from the 2008 annual report and when not clearly stated, the researcher extracted the figures from Thomson Analytics/DataStream.

6.4.1 Problems associated with scoring annual reports

The scoring of the annual reports was not a straightforward procedure; there are certain problems that were encountered. Some of the problems included (1), determining the relevance of certain disclosure items to certain companies; (2),

[37] These included the proportion of non-executive directors on the board, the audit committee size, the number of board meetings held during the trading period, the number of financial experts on the board, the board size and the proportion of share owned by the directors.

[38] These included the company size, the gearing ratio, the profit ratio, the liquidity ratio, multinationality (i.e. whether the company had substantial operations outside the UK), listing status and multiple listing.

differentiation of when companies use different terms to refer to a similar item of disclosure; (3), how to best quantify the items of disclosure; (4), issues of consistency and accuracy among many others. These are some of the main problems that were identified and for this reason; this discussion will only focus on these problems and not so much the minor issues.

The first problem of determining the relevance of disclosure items to particular companies has been argued for a long time because there are grey areas. Some scholars (Cooke, 1989a) have argued that in the case of non-disclosure, it is not always clear whether the item is relevant or not. Cooke (1989a), Tauringana (1997) and Li et al. (2008b) for instance, all decided to analyse the whole annual report in order to decide whether items were merely not disclosed or whether those items were not relevant to the company in question. This procedure was particularly successful in these studies and has been adapted for this research. This method of considering the annual report in its entirety was adopted for this study. This can be evidenced through the comprehensiveness/word count methodology for instance, where the total number of words in the annual report was taken into account. Considering all the words used in the annual report is an illustration that the annual report was analysed from cover to cover. Part of the reasons why some companies may not disclose certain information is because of differences in the industries within which they operate. A company in the oil and gas industry for instance, may place particular emphasis on environmental disclosures such as carbon dioxide (CO_2) emissions whereas a recruitment firm may place emphasis on geographical expanse. Different KPIs may thus bear different weightings of importance to different companies and even different industries as posited in previous research (PWC, 2006). This phenomenon is mainly due to the relevance of KPIs to company or industrial objectives.

The second problem in scoring annual reports was experienced when companies used different wording, expressions and phraseology yet referring to the same item of disclosure. Some companies referred to a figure/monetary value as the profit, some historical profit and others profit after tax yet they were all referring to an amount that had the same basis calculation. Another of these examples was when debt was referred to in the reports as gearing or leveraging. It was necessary for a decision to be made on how to interpret these figures/terms objectively for this research. Where calculations such as financial ratios were made, it was checked whether the formulae used were similar across different company reports. In the case of gearing and profit ratio for example, the figures were obtained from Thomson Analytics[39]. The use of a similar formula enables consistency in the data measurement. Although this method does not necessarily solve the whole problem it allows for a transparent platform for scholars to understand how the procedure was undertaken and gives room for innovation based on the nature of the research in concern. This procedure was used as early as Buzby (1974) and has been used through literature to date, it is the same method adopted in this research.

The third problem was about the manner in which disclosures are quantified for statistical purposes. Copeland and Fredricks (1968) on evaluating disclosure of changes in common stocks suggested that one good way of measuring disclosures is by counting the number of items disclosed. On the contrary this method was argued against (Marston and Shrives, 1991a) with a more subjective procedure of grading disclosures in three classes from poor to excellent. The ideology may stem from the premise that

[39] Thomson Analytics is a finance database. Figures and ratios extracted from this database had the same basis of calculations hence increased objectivity of the selected independent variables for this research.

researchers look for different things in any research article hence the measure of scoring used would be subjective. It should also be relevant to the particular study rather than sticking with objective measures which may not be as robust in certain studies. It has also been suggested that measuring disclosures by counting data items is not a satisfactory solution due to the fact that there may be repetitions of certain numbers and words (Cooke, 1989a). A method suggested by Firth (1979) and was later adopted by numerous researchers (Cooke, 1989a, Cooke, 1991, Milne and Adler, 1999b, Mangena and Tauringana, 2007a) thereafter. The dichotomous method was employed as well as the comprehensiveness methodology similar to that used by Li et al. (2008b). The final main problem identified in the data collection and methodology was that of consistency and accuracy. It is often difficult to maintain the same level of accuracy due to the variability of the reported information, fatigue and other issues that set in as a result of the laborious tasks. Although certain scoring rules are put in place and independent adjudicators were used, this is not a guarantee for consistency throughout the scoring process. The use of independent adjudicators is discussed in further detail under validity and reliability of the methods employed.

The scoring rules are set by the researcher based on their interpretation of the information. This process therefore results in the subjectivity of the scoring procedure. The degree of subjectivity may be mitigated by referring to prior studies, using inter-coders and awarding of equal scores to disclosed items (e.g. Beattie et al., 2004b, Meek et al., 1995a, Schadewitz et al., 2002b, Tauringana and Mangena, 2006b, Wallace and Naser, 1995, Watson et al., 2002a). One may however argue that the attributes do not carry equal weightings. On scoring for comprehensiveness for example, a score of one is awarded regardless of whether the KPI attribute refers to presence, comparison or reason for disclosure. Using the selected method was found to

be strong in the sense that it eliminated the level of subjectivity when assigning scores, this in turn also made the job more objective for the inter-coders who already had a set of rules on making scoring decisions. Some studies (e.g. Beattie et al., 2004b, Wallace and Naser, 1995, Kyeyune, 2010) recognise that rather than subjecting information items to subjectivity scores (for example: less important to most important, worse to best) it may be a better measure to score narratives based on the attributes disclosed hence making them less vulnerable to subjectivity. Another support for awarding a similar score for each attribute identified is the argument that different scores for each attribute negate the rationale that the decision to disclose an information item is in recognition that each respective item is useful for decision making (Chau and Gray 2002).

Some studies (e.g. Beattie et al., 2004b, Beattie and Thomson, 2007) acknowledge that consideration of attributions in measuring extent of disclosure is a time consuming process. Judging by the time it already took to score the existing reports, it would add an extra strain on the time front if scores were to be weighted. A weighting test was conducted for two randomly selected annual reports and it was calculated that it would be considerably time consuming. Attaching weights would also introduce great subjectivity.

6.4.2 Weighting of Disclosure Items

The two main scoring schemes found in the review by Jones and Alabaster (1999) were the weighted and unweighted dimensions. Weighted scores (e.g. Beattie et al., 2004a, Schadewitz et al., 2002a, Wallace and Nasser, 1995, Fischer et al., 2010) mainly measure the degree of specificity while unweighted scores (e.g. Meek et al., 1995b, Tauringana and Mangena, 2006c, Watson et al., 2002b, Kyeyune,

2010) are more of a dichotomous scale that seek the presence or absence of a piece of information.

Cooke (1989a) once stated that different information would bear different importance to different users. As a consequence of that disparity, decisions would have to be made by the researching entity on how the independent variables are to be operationalised. One of the early disclosure studies by Cerf (1961) assigned weights by reviewing the literature and surveying the user group. Buzby (1974, 1975) surveyed a number of subjects and took the resulting averages as the weightings whereas Cerf (1961) ended up with integers. Judging by face value, one may instantly note that the methods of weighting may be different and hence tantamount to subjectivity. An unweighted approach assumes that all information items are equally important. It has been argued (Firth, 1980, Firth, 1979, Chow and Wong-Boren, 1987, Cooke, 1989a) that when there are a large number of items in the index as is the case with this study. It is an expectation that the companies will be ranked in the same way regardless of weighting because both sets using weighted and unweighted generally display a similar trend in the results (Marston and Shrives, 1991a).

Gray et al. (1995) suggested that assigning weights is a subjective matter therefore unless the preferences of the researcher are well known, an objective approach may be more useful. Marston and Shrives (1991b) suggest that quantifying disclosures may measure extent but not necessarily quality of information. Beattie et al. (2004a) suggest that despite the problems that are brought about by quality measurement, a surrogate of disclosure quality can be achieved by attaching weights to information.

Finally, Spero (1979) posited that companies that are good at disclosing are generally good for both important and less important information hence attaching weights would be irrelevant. A number of merits are attributed to the unweighted score. Although Chau and Gray (2002a) conducted their study supporting the argument that all information items are of equal importance, they used weighted scores in their study. Several empirical studies (e.g. Barako et al., 2006c, Wallace and Nasser, 1995) have found that there is no difference in the results for which either weighted or unweighted scores were used. Numerous other studies have thus used an unweighted scoring system due to the similarity exhibited in the results of other studies (e.g. Chavent et al., 2006, Mangena and Tauringana, 2007b, Meek et al., 1995b, Tauringana and Chong, 2004, Tauringana and Mangena, 2006c). This study has therefore adapted an unweighted index based on a balance of the arguments advanced in the area. The subjective weights of different user groups would even each other out. Beattie et al. (2004a) also made a similar observation that the ability to attach mathematical scores to disclosures does not necessarily mean that the quantities are true proxies for quality. In the case of comprehensiveness which assesses the quality of KPI disclosures in this study; the researcher simply checked against whether the comprehensiveness attributes[40] had been reported or not rather than attaching weights.

[40] The four attributes checked against include presence of KPIs, disclosure of the relevant amounts, disclosure of the reasons for change in the quantities and disclosure of KPI forward looking information.

6.5 Methods of Estimating the Dependent Variables

Henceforth, the regression equation is discussed. Variables included in the equation are discussed from the left hand side to the right hand side of the equation i.e. the dependent variables are discussed first, followed by the independent variables. The following sections discuss how the dependent variables were estimated. Beattie and Thomson (2007) highlighted in their study that several studies that involve disclosure measurement lack transparency, rigour, specificity and uniformity. They point out that these deficiencies often lead to misleading evidence. This study on KPI disclosures makes use of three main measures to estimate the dependent variables namely the dichotomous system, the word count methodology and the comprehensiveness methodology. Li et al. (2008b) in their study used similar measures to the ones used in this research for example the word count method and disclosure variety.

6.5.1 The Dichotomous System

As it is the scientific technique approach that is adopted in this thesis, the scoring of annual report KPI disclosures was quantified. Using the dichotomous system for scoring the reporting of KPIs, the presence of a KPI in the annual reports was labelled [1] where a KPI disclosure was made and [0] where the company in question did not report any KPIs in the annual report. The first stage of the scoring was to measure the extent of disclosure. In the case of estimating the dependent variable based on the extent of disclosure; the selected index for each company was the difference between the summation of all the reported KPIs and the summation of irrelevant KPIs to that respective entity collected from the study sample of company reports as in previous study (e.g. Kyeyune, 2010, Hassan et al., 2011b, Acerete et al.,

2011). This method ensures that the level of disclosure is only calculated based on the attributes that are relevant to the entity in question.

The applicability of disclosure items to the companies under scrutiny was taken into account in order to avoid penalising companies that did not disclose certain information items. A similar scoring process was executed for both sets of companies (private limited and public listed). The adjustment for non-applicable items has been exercised in some previous research (e.g. Cooke, 1989a, Lopes and Rodrigues, 2007, Tauringana and Mangena, 2009, Inchausti, 1997, Li et al., 2008b) as opposed to the method used by Chalmers and Godfrey (2004)[41]. The total disclosure (KPISCORE) score arrived at for a company is additive as below:

$$\text{KPIscore} = \sum_{i=1}^{n-x} d_1$$

Where: d = one if the item d_1 is disclosed; zero, if the item d_1 is not disclosed

n = number of disclosure items

x = non-applicable disclosure items

6.5.2 Word Count Methodology

The use of the dichotomous scale as the scoring instrument for the disclosure index has been criticised before. The criticisms have been due to the failure for the

[41] Companies that did not use derivatives and made no disclosures in that regard were considered to be non-disclosing firms. In their study, they assumed that that the most companies use derivative instruments thus should disclose as such. Non-adjustment of non-applicable items may be viewed as introducing a significant bias to the research.

scale to recognise the importance of information items although it has been counter argued that the importance of disclosure items is down to the researcher's discretion. The dichotomous scale therefore does not indicate how much emphasis is given to particular content categories. In order to overcome some of the problems associated with the index score. This study introduces the word count methodology which captures the volume of KPI (KPIWC%)[42] disclosures in the annual reports under scrutiny. This is similar to the method used by Li et al. (2008b) in a study on intellectual capital disclosures.

Zeghal and Ahmed (1990) suggested that using words would provide the maximum robustness in assessing disclosure because they are the smallest unit of measurement for analysis. The coding using this method was therefore by taking what Beattie and Thomson (2007) term 'pieces of information,' i.e. phrases and words. KPIWC% constitutes the total number of words that were used to describe all the KPI items reported in the annual report and the figure divided by the total number of words in the whole annual report. Words that were used in annotating graphs and pictures were not included as part of KPIWC%. In support of this method, it was noted that Krippendorff (2004b) stated that words were a preferred measure particularly where a researcher intends to assess the total space devoted to a theme or topic. The total volume of words may also be used in judging the importance of that topic if one were to compare themes. The word count methodology is a measure that has been identified in prior studies relating to the assessment of disclosure quantity in annual reports. KPIWC% is a measure of importance of the theme in the annual report and the overall responsiveness by the corporate management as supported by

[42] Key performance indicators word count percentage.

Li et al. (2008b). During the scoring process, it was noted that some firms scored low on the dichotomous scale (KPISCORE) but would have a high KPIWC%. Such instances demonstrated that some management placed greater focus on explaining KPIs in their annual reports.

6.5.3 Comprehensiveness Methodology

Comprehensiveness is the final measure that was introduced to this study. This measure was devised because it was noted that both the dichotomous and the word count methodologies capture mainly quantitative attributes of KPI reporting in the annual reports of the companies under scrutiny. The comprehensiveness method is split into four main sections which are (i), presence; (ii), amounts & comparison of past performance; (iii), reason for performance and (iv), the forward looking attribute.

The attributes that were chosen as the measure for comprehensiveness all have their merits as far as usefulness is concerned to information users. Firstly, presence; as per the KPI definition will indicate that disclosure of a KPI will provide information relating to the performance, position and development of the business hence providing further information to various stakeholders in order to enhance the decision making process. Secondly, amounts and comparison of past performance will enhance users of annual reports by providing trends from which users can assess progress within the business over several years. Third, reason for performance will enlighten users as to why the reporting entity has performed a certain way therefore they can make more informed decisions as well as inferences about the future. Fourth, the forward looking attribute provides information to users about the prospect of the reporting firm from the perspective of management. Often this

information incorporates management's plans for the direction in which they wish to take the company in the future.

At the time of writing the thesis, the rhetoric in various disclosure studies (e.g. Beattie et al., 2004a, Hooks et al., 2000, Nielsen, 2004) is oriented towards explaining disclosure measurement by way of quality attributes. This was informative on the various considerations, both theoretical and practical, concerning the development and application of a technique that is reliable. Since many previous studies have used the term quality to refer to a variety of different attributes this study substitutes the term 'quality' with 'comprehensiveness' so that a distinction can be made and also to ensure clarity of communication. Comprehensiveness is measured by the attributes listed below.

Presence

The comprehensiveness methodology involved four stages. The first of these four stages was a check for presence of KPI disclosures. Presence is a measure that is similar to that used by Kyeyune (2010) in which; each present ordinal score was awarded a score of [1] to represent that the respective KPI item at least appeared once in the annual report. The total score that could be attributed to each company under scrutiny here would be the summation of the KPIs that are reported and identified in the annual report. In cases where companies did not make any disclosures in their annual reports, the score of [0] would be recorded and the scoring process would be discontinued as it would be impossible for a company that recorded [0] for Presence to have any other score above [0] for the consequent comprehensiveness categories.

Where a company had a score of [5] for its presence for example; it would entail that the particular company disclosed five KPIs in its annual report. All these five KPIs would then also be checked against amount, reason for change and forward looking disclosures. The maximum attainable score for a company that disclosed 5 KPIs for example is illustrated below:

Company "x"

∑ (KPIs disclosed in annual report)	5
(Multiplied by) Total number of categories	4
Maximum possible comprehensiveness score	20

Amounts and Comparison of current with past performance

In the annual reports that were analysed, it was noted that approximately 99.25% of the reports that disclosed an amount against KPIs also disclosed comparisons with previous years. For this reason, the variable was treated as one combined measure. It is recommended in the guidance for the reporting of KPIs that a quantified measure should be attached to the KPI being reported (P.W.C., 2007). The Accounting Standards Board also recommend that while attaching a quantified measure to KPIs reported in the annual report, the quantified data should also show comparatives over several years (Accounting Standards Board, 2006). Due to the guidance available, a decision was also made to take this comprehensiveness measure as singly (amounts and comparison).

It may be suggested that the combination of amounts and comparison warrant them to be considered as one variable due to the increased precision of the measure as opposed to disregarding one of them. The companies that did not disclose both parts of this variable were minute hence only those companies that reported both

parts were considered for the study and this totalled to approximately 99.25% of the original sample. Every KPI that was disclosed by the relevant company in the annual report was therefore checked for amounts and comparison and the maximum possible score attainable was equal to the number of KPIs that were disclosed by the particular company in question.

The Reason for Performance

Following the checks for presence, amount and comparison; the next category for comprehensiveness checks on the same report was that of reason for performance. Kyeyune (2010) used a similar method in which whenever the reason for performance attribute was identified in an information item, an ordinal score "R" was awarded. In this study, it was noted that there were some repetitions where similar reasons were applicable to the same KPI item. These repetitions were considered as individual items and awarded a single score for the reason disclosed. After awarding "R" to reasons for performance attribute in all information items, the ordinal scores were then converted into nominal scores by assigning [1] every time "R" was identified. All the [1] scores were added up to give a total score for the reason for performance attribute. The minimum possible score for this category would be where a company did not provide any reasons for the trends reported in their KPIs and the maximum score would have been where companies provide an explanation in the KPI trend for all the KPIs reported. A company reporting five KPIs for instance would score a maximum score of five for the reason for performance attribute.

The Forward Looking Attribute

Anticipatory statements regarding KPIs were also scored against as part of this study. The main reason for deciding to include this measure is because it is recommended by the Accounting Standards Board (2006) that the Operating and Financial Review (OFR) should contain "prospective information about the development, performance and position of the company" in reference to KPI information. The OFR RS1 recommends quantified targets to be stated where KPIs are reported. It was therefore decided that this is a measure that is vital to the comprehensiveness of KPIs reported and should be considered as part of the study. Another recommendation on the disclosure of KPIs in annual reports stated that "either way, a forward looking orientation is essential for readers to assess the potential strategies to succeed, and to give them a basis against which to assess future performance" (P.W.C., 2007).

Using a similar technique to that used for the reason for performance attribute. An ordinal score "F" was awarded in the reports for where forward looking information was attached against reported KPIs in the BR section of the annual report. The researcher then revisited and converted all the "F" scores to [1]. All the [1] scores per report were added up to provide the total score for forward looking disclosures pertaining KPIs in the annual report under scrutiny. Similarly the minimum possible score for this category would be where a company did not provide any forward looking information against the reported KPIs and the maximum score would have been where companies provided forward looking information for all the reported KPIs.

6.6 Operationalizing the Independent Variables

Some of the variables in question can be measured in more than one way for example gearing and profitability; therefore it is necessary to establish and operationalizing mechanism. Independent variables have been selected having paid attention to some of the problems associated with the scoring of annual reports and weighting of voluntary disclosure items. The following section therefore identifies, defines and explains how the independent variables will be measured for the purpose of the research.

6.6.1 Corporate Governance Mechanisms

Six independent variables were analysed under corporate governance mechanisms. These variables mainly relate to attributes regarding the board of directors ranging from its size to the frequency of board meetings held during the trading period of the (2008) annual report analysed in the study.

Table 6: Operisationalisation of Corporate Governance Mechanisms

Variable	Proxy	Measurement and Source
PNED	Proportion of non-executive directors	Represents the number of non-executive directors as a proportion of the total number of directors on the board. This information was attained from the directors' biographies in the 2008 annual reports.
AUDSIZE	Audit committee size	Calculated as the total number of directors on the audit committee as a percentage of the total of board members.
BOARDM	Frequency of board meetings	Represents the total number of board meetings held throughout the year to the 2008 annual report.
FINEXP	Proportion of finance experts	Calculated as the number of board members with financial expertise/finance professionals as a percentage of the total board size as identified in the 2008 annual reports.
BDSIZE	Board size	Constitutes the total number on the board of directors as identified in the 2008 annual report.
DSHARE	Director share ownership	Represents the directors' interests in the company under analysis. The value is calculated as the percentage of voting shares held by the board members divided by the total issued shares. The share quantity did not include any shares held in trust but included those held on behalf of family members.

6.6.2 Company Specific Characteristics

Seven independent variables were analysed under company specific characteristics. The main themes of the variables analysed under this category cover other themes related to the company such as corporate performance (e.g. profit ratio) and capital market related variables (e.g. listing status).

Table 7: Operisationalisation of Company Specific Characteristics

Variable	Proxy	Measurement and Source
COSIZE	Company size	This figure is a measure of shareholders' funds according to the Statement of financial position for the period in the 2008 annual report measured in billions (£bn).
GEAR	Gearing ratio	Calculated as long term debt divided by total assets from the 2008 annual report figures.
PROF	Profit ratio	Calculated as net profit before tax and extraordinary items divided by turnover from the 2008 annual report.
LQDT	Liquidity ratio	Calculated as current assets divided by current liabilities according to the 2008 annual report figures.
MULTIN	Multinationality	Represents whether the company only operates within the UK or whether the company also operates internationally. The symbol [0] was used to denote those companies operating only within the UK and the symbol [1] to denote those companies operating internationally.
LSTAT	Listing status	Variable was coded [1] if the company was listed on the LSE and [0] if not.
MLIST	Multiple listing	Depicts where a company is listed on more than one stock exchange (LSE) and was coded [1] if so and [0] if not. This information was attained from Yahoo Finance which lists all the stock exchanges with which every company in question is listed.

6.7 Hypothesis Testing and Statistical Tests

6.7.1 Hypothesis Testing Approach

The purpose of the research is the main determinant of the approach on testing the hypotheses for the study. One of the main objectives of this study is to investigate the relationships between KPI disclosures in annual reports of large UK companies with corporate governance and company specific characteristics. The study aims to determine the explanatory power of these variables on KPI disclosures. Both comprehensive and quantitative measures have been synthesised for future statistical inferences. Multivariate analysis has therefore been undertaken to indicate the collective contributions of a combination of independent variables to the dependent variable.

6.7.2 Statistical Tests and Conditions

There are two main streams of tests that can be performed and they are branched into parametric and non-parametric tests (Dardor, 2009, Nachmias and Nachmias, 1976, Field, 2009). The application of each type of statistical procedure depends on the data meeting certain conditions. Non-parametric tests are mainly based on a model that requires very general conditions. They do not require a specific form of distribution from which the sample was drawn; the observations just require to be independent and the variables under the study need to have underlying continuity (Field, 2009). The assumptions associated with parametric tests are stronger than those for non-parametric tests (Siegel and Castellan, 1988). Noether (1991) and Field (2009) for instance suggest that non-parametric statistical methods are generally considered to be less powerful than parametric statistical methods. The applications of parametric tests therefore require a number of more stringent conditions to be met. Siegel (1956)

more specifically suggests that the employment of parametric tests is based on four major assumptions.

First, the observations must be independent, i.e. the selection of any one case from the population for inclusion in the sample must not bias the chances of any other case for inclusion, and the score which is assigned to any case must not bias the score which is assigned to any other case. *Second*, the observations must be drawn from normally distributed populations. *Third*, in the case of analyses concerning two groups, the population must have the same variance. *Fourth*, the variables must have been measured on at least an interval scale, so that it is possible to interpret the results.

Gaito (1980) argues against some of the preconditions specified by Siegel (1956). Gaito (1980) believes that there are some misconceptions of the precondition and suggests that statistical procedures do not require specific scale properties. Gaito (1980) states that "the numbers do not know where they come from." In support of this assertion, Gaito (1980) refers to a number of statisticians and concludes that confusion between measurement theory and statistical theory has led to the persistence of this misconception. Other authors such as Gregoire and Driver (1987) have empirically demonstrated that the use of parametric tests on ordinal data does not lead to great problems. This has thus shed light on the argument by Gaito (1980) that there is overemphasis on the assumptions of parametric tests. Davidson and Sharma (1988) however provide theoretical proof that there is no need for the measurements to be on an interval scale if the assumptions of normality and homogeneity are met.

Although logistic regression was used in this study for private limited companies, multivariate analysis in the form of the ordinary least squares (OLS)

regression analysis was also employed. The underlying assumptions of this method that have to be met before computing the statistical tests are discussed in further detail below. They have been grouped into four categories namely multicollinearity, normality, linearity and homoscedasticity.

6.7.2.1 Multicollinearity

When there is strong correlation between two or more predictors in a regression model then it is termed multicollinearity (e.g. Koutsoyiannis, 1972, Moore and Buzby, 1972, Dardor, 2009, Tauringana, 1997). When there are high levels of collinearity, there is an increased probability of predictors to be found as non-significant and thus rejected in the model (e.g. Kremelberg, 2011, Wright, 1997, Field, 2009). Two tests will be carried out in this study to check for the existence of multicollinearity. An examination of the correlation matrix to determine whether the independent variables were significantly correlated will be carried out first. The general consensus among authors is that multicollinearity problems become harmful when the correlation coefficient exceeds 0.8 to 0.9 (e.g. Judge et al., 1985, Kennedy, 1985, Myers, 1990, Gujarati, 1995, Field, 2000, Pallant, 2001, Kyeyune, 2010).

It has been suggested that a certain degree of multicollinearity can still exist even when none of the bivariate correlation coefficients is very large according to Myers (1990). Field (2009) and Dardor (2009) suggest that this is because one independent variable may be an approximate linear function of a set of several independent variables. The second diagnostic that will be carried out involves an examination of the Variance Inflation Factor (VIF). VIF merely indicates whether a predictor has a strong linear relationship with other predictors (Kremelberg, 2011). Previous studies have suggested that VIF values should create a problem only when they reach values of 10 (Neter et al., 1985, Myers, 1990). Some studies opt to use a diagnostic that involves an examination

of the Tolerance values. The tolerance statistic is a reciprocal of the VIF. Under tolerance statistics, values of below 0.1 indicate serious problems (e.g. Norusis, 2005, Field, 2009). Some authors have however suggested that values below 0.2 are worthy of concern (Menard, 1995).

Multicollinearity introduces a range of problems for instance if two independent variables are collinear; they behave in a linear fashion, either negative or positive. They behave as if there is a linear relationship between them. Collinear variables generally move in the same direction as each other and pretty much behave like a single variable. One of the issues that arise in multicollinearity is that it becomes very difficult to separate the individual effects of each variable. Tauringana (1997) for example, further suggests that collinearity produces unrealistically high standard errors on the partial coefficients. He states that "the abnormally high standard errors are sometimes sufficiently large to cause the calculated *t* statistic to be smaller than the critical *t* statistic. This tendency towards reporting smaller *t* values often result in researchers mistakenly accepting the null hypothesis that the partial regression coefficient is effectively zero" (Tauringana, 1997, p.185). In such cases it is very easy for results to show no association between the dependent and independent variables when in fact an association does exist. Another of the problems that arise from multicollinearity is that of the exceptional sensitivity of the data set being used in the estimation. In such cases it becomes extremely difficult to replicate the results when a different data set is employed even though the variables are unchanged. Tauringana (1997) explains that where multicollinearity exists, it may be found that the partial regression coefficients estimated from one data set may be different from those estimated from another data set.

The final major problem that will be highlighted in this study on multicollinearity is the fact that the results of the estimation are dependent on the exact specification of the model being tested. Relatively minor changes in the specification of the model should not cause drastically different coefficients but in the existence of multicollinearity, a minor change in the model being estimated that would normally have very small effect on the parameter estimates would generate grossly different results when independent variables are collinear (Tauringana, 1997). Two ways to deal with collinearity would be to get another data set on the same variables that have no multicollinearity or to enter the collinear variables one at a time (forward stepwise regression) and observe the explanatory power of each model.

6.7.2.2 Normality

Histograms and normality probability plots were constructed in order to assess the magnitude of the problems associated with the normality of the data in this study. The plots can be located in Appendix 4, 5 and 6 for private, public and pooled companies respectively. Other standard tests on skewness, kurtosis and Kolmogrov-Smirnov tests of normality have also been known to be used to determine whether the sample came from a normally distributed population. As suggested from other prominent studies, the data will be transformed into natural logarithms where the assumptions of normality are not met (e.g. Kremelberg, 2011, Cooke, 1998, Field, 2009).

6.7.2.3 Linearity

Scatter plots of the residuals were produced and examined using SPSS in order to check for the assumption of linearity, this is a similar method to that used in

previous studies such as Kyeyune (2010) and Dardor (2009) among many. The plots are located in appendix 4, 5 and 6 for private companies, public companies and pooled companies respectively. It is assumed that the residuals have a linear relationship with the predicted dependent variable scores, and that the variance of the residuals is the same for all predicted scores (e.g. Field, 2009, Coakes and Steed, 2001, Pallant, 2001). The assumption of linearity is observed to have been violated if there is a funnel pattern. Extreme deviations also represent a violation of linearity. Transforming the data is a solution that overcomes these problems (e.g. Norusis, 2005, Dardor, 2009). Other authors suggest that mild variations are not considered to be a serious problem (e.g. Tabachnick and Fidell, 1996, Coakes and Steed, 2001, De Vaus, 2002).

6.7.2.4 Homoscedasticity

Homoscedasticity is defined as a situation where the variability in the scores for one variable is roughly the same at all values of the other variable (Coakes and Steed, 2001). It may therefore be said to be concerned with how the scores cluster uniformly about the regression line. The assumption of homoscedasticity will be checked using SPSS and this through a visual examination of the standardised residual scatter plots, this is a similar method used by Dardor (2009). The equal variance assumption is satisfied if the residuals appear to be randomly scattered around the regression line (e.g. Norusis, 2005, Field, 2009, Coakes and Steed, 2001). The data may once again be transformed if the assumption of homoscedasticity appears to have been violated (e.g. Norusis, 2005).

6.8 Choice of Statistical Tests

From the above discussions, the choice of statistical tests that could possibly be applied lie within the univariate or multivariate categories. The main problem with univariate techniques is that they focus only on an individual causality for an event. A simple example is suggesting that company size is significantly associated with the extent of KPI disclosures in annual reports. It is difficult to suggest that company size alone is the influencing factor because there are several other possibilities and therefore it seems flawed to just focus on one explanatory variable and suggesting that it is the cause for changes in the quantity of KPI disclosures in annual reports. It is essential as suggested by Dardor (2009) to include several plausible explanatory variables in a model at the same time. One of the problems of using multivariate tests is that they have certain conditions that need to be met as discussed earlier. It may be impossible to have a data set which is strictly normally distributed[43]. Multivariate tests were chosen as the stronger of the two techniques in this study for the purpose of the research. Field (2009) suggests that both sets of tests have their strengths in statistical calculations.

6.8.1 Selection of Methods of Regression

Multiple regression analysis is the statistical method that was chosen to determine the nature of the relationship between KPI disclosures in annual reports of UK companies and explanatory variables. There are several procedures that can be utilised in the computation of multiple regression analysis as far as the selection of independent variables to include in the regression model is concerned. The three

[43] This refers to data which has a skewness coefficient of 0.00.

main types include standard or forced entry method, the block wise entry method, and the stepwise method (Field, 2009, Pallant, 2001). In the standard entry method, all the independent variables to be included in the model are simultaneously entered. The standard entry method was the selected method for this study, it is one in which each independent variable is evaluated in terms of its predictive power, over and above that offered by all the other independent variables. Other studies suggest that this approach also reveals how much unique variance in the dependent variable is explained by each of the independent variables (Dardor, 2009, p.122, Pallant, 2001, p.135).

The other two independent variable entry methods are the block wise and the stepwise methods. Field (2009) suggests that in the block wise entry, the independent variables are entered in the order of their importance based on prior research. Pallant (2001) suggests that any new variables can either be entered using the standard or stepwise entry methods. In the final, stepwise method, the variables entered first into the model are those that have the highest degree of correlation to the dependent variable. Subsequently the other exogenous variables are included one by one, on the basis of the partial correlation coefficients. Dardor (2009) explains that under this method, a new variable is included in the model on the conditions that its t-statistic is larger than a critical value and that the t-statistics of the other variables that are already in the model do not diminish below that value after the inclusion of the new variable. It was decided to use the standard multiple regression method in order to determine the variance in the dependent variables (KPI disclosures). The preferred and selected method is similar to that used in several previous studies (e.g. Wallace et al., 1994a, Wallace and Naser, 1995, Depoers, 2000, Ho and Wong, 2001b, Li et al., 2008b, Dardor, 2009).

6.8.2 The Regression Models

After all the above considerations, it will then be necessary to run the regression analyses. The objective of running the analyses is to establish whether there is a relationship between the dependent variable (KPIs score) with the independent variables from all the categories stated above. Three models will have to be drawn up, that is, (1) for the public listed firms, (2), for the private limited firms and (3), for the pooled set of data. Market related variables were excluded in the regression equation for private limited companies as they do not operate on the stock exchange. The same rule will apply for the pooled set of companies as half of the sample will constitute those companies that are not listed on the LSE. The Ordinary Least Squares (OLS) Regression Analysis that will be manipulated may be expressed in the form of the models as below:

Private Companies

$$KPISCORE/COMP/WCOUNT = \beta_0 + \beta_1 PNED + \beta_2 AUDSIZE + \beta_3 BDMEET + \beta_4 FINEXP + \beta_5 BDSIZE + \beta_6 DSHARE + \beta_7 COSIZE + \beta_8 GEAR + \beta_9 PROF + \beta_{10} LQDT + \beta_{11} MULTIN + \varepsilon_j$$

Listed Companies

$$KPISCORE/COMP/WCOUNT = \beta_0 + \beta_1 PNED + \beta_2 AUDSIZE + \beta_3 BOARDM + \beta_4 FINEXP + \beta_5 BDSIZE + \beta_6 DSHARE + \beta_7 COSIZE + \beta_8 GEAR + \beta_9 PROF + \beta_{10} LQDT + \beta_{11} MULTIN + \beta_{12} MLIST + \varepsilon_j$$

Pooled companies

$$KPISCORE/COMP/WCOUNT = \beta_0 + \beta_1 PNED + \beta_2 AUDSIZE + \beta_3 BOARDM + \beta_4 FINEXP + \beta_5 BDSIZE + \beta_6 DSHARE + \beta_7 COSIZE + \beta_8 GEAR + \beta_9 PROF + \beta_{10} LQDT + \beta_{11} MULTIN + \beta_{12} MLIST + \beta_{13} LSTAT + \varepsilon_j$$

Table 8: Definition of Regression Model Variables

Regression Term	Description
KPISCORE	Quantity of KPIs disclosed as a percentage of the index.
KPIWC%	KPI score as a percentage of the total word count in the annual report
COMP	Measure of quality taking into account presence of KPIs, relevant amount being stated, reason for changes being provided and provision of forward looking information.
PNED	Fraction of non-executive directors on the board.
AUDSIZE	Total number of members on the audit committee.
BOARDM	Frequency of board meetings per annum.
FINEXP	Proportion of financial experts on the board of directors.
BDSIZE	Total number of member on the board of directors.
DSHARE	Proportion of shares owned by board members at annual report date.
COSIZE	Company size by shareholders funds.
GEAR	Long-term debt divided by capital employed.
PRAT	Profit measured as operating profit divided by capital employed at the annual report date.
LQDT	Current assets divided by current liabilities.
MULTIN	Presence of company outside the UK.
LSTAT	Variable to depict whether a company is listed on the LSE or not.
MLIST	Variable to depict whether a company is listed on the LSE and another stock exchange.
$\beta_0 \ldots\ldots \beta_{10}$	Regressors/regression coefficients.
ε_j	The disturbance/error term

Since a limited number of private limited companies disclosed KPIs in their annual reports, it may be inappropriate to include non-disclosing entities in the regression model. Only the private limited disclosing companies were considered in the pooled companies' model.

6.8.3 Validity and Reliability

Validity and reliability considerations of the techniques employed for this study were considered as recommended by Marston and Shrives (1991a). Bouma and Atkinson (1999) also suggest that for a dependable content analysis it is important to ensure validity and reliability. Validity relates to the accuracy fit of variables to a concept, while reliability is concerned with the achievement of similar results by different researchers while analysing similar content with an identical research device (Kyeyune, 2010). Marston and Shrives (1991b) also agree that satisfactory levels of measurement in content analysis are attained through the assurance of validity and reliability. The conformity to the requirements is explained below.

6.8.3.1 Validity Considerations

The concept of validity dates back as early as 1985 where Weber (1985) identified two types of validity namely internal face and external validity. Internal face validity refers to the correspondence between the researcher's definition of a concept and the categories that are used to measure it (Weber, 1985, Gustavsson et al., 2000). The second, external validity is associated with the attesting of the measurement tool to external tests of conformity (Allee et al., 2007). Weber (1985) also attached hypotheses that related to a theoretical framework which is linked to

the research tool. These were broken into predictive validity that seeks the predictability of the disclosure model and semantic validity which is associated with the extent to which the text units grouped together have similar meaning. This study applies external validity as explained by Weber (1985). This study emulates Weber's (1985) guidance by making use of a disclosure measurement tool that is in line with prior literature and places a substantial amount of dependence on current disclosures regulatory guidelines. Confirmation of validity can be supported by the fact that the constructs for this study are similar to previous research (e.g. Kyeyune, 2010, Beattie et al., 2004b), further confirmation was through the literature review for studies investigating disclosures in financial reporting. Throughout this study, references have been used in the construction and application of methodologies (e.g. the disclosure indices and scoring techniques).

6.8.3.2 Reliability Considerations

According to Krippendorff (2004b), reliability can be explained through three models. The first being *stability*; this is where there is consistence of the same coder over time while coding the same content. The second being *inter-coder reliability* in which consistency between different coders is examined, the coders analyse similar data/content. The final one noted by Krippendorff (2004b) is *accuracy*; it is concerned with the extent to which classification of text corresponds to a standard or norm. In the context of financial reporting content analysis, inter coder reliability is normally used owing to the weakness in stability and the absence of standard coding (Beattie et al., 2004a). Milne and Adler (1999a) suggest a ratio based estimation of reliability in which observed matches are weighted against the expected matches. This method is argued against by Beattie et al. (2004a) who suggest that this method

is an inadequate technique since the ratio is based on pair-wise inter-judge agreements to the total number of pair wise judgements; without controlling for random agreements. The inter-coder reliability was conducted in this study for the scoring techniques employed.

The purpose of reliability is to assure the quality of research as reinforced by Kyeyune (2010) in their study on the relative information content of complementary and supplementary narrative commentaries. It is further suggested that where there are high degrees of variation amongst coders, this phenomenon would indicate that there is a possibility of several weaknesses within the research (see Lombard et al., 2002b, Kolbe and Burnett, 1991). Some examples of the possible weaknesses would include issues such as poor organisation, poor definition of the research tools and inadequate training of the coders among many possibilities. Under inter coder reliability there is the advantage of the work being distributed among other coders (Neuendorf, 2011). Other authors further suggest that this method is less susceptible to methodological errors (Potter and Levine-Donnerstein, 1999, Rust and Cooil, 1994).

Tinsley and Weiss (2000) suggest that there are two ways to compute inter coder reliability in order to measure the level of consistency. The first is through correlation (analysis of variance) which may be used as an indicator of the degree of similar rating by different coders expressed as a deviation from the means. The second method is that of inter coder agreement which may be applied by assessing the extent to which the coders assign the same scores to each object that is being scored in the data to be computed. Tinsley and Weiss (2000) further argue that inter coder agreement is a more defensible strategy for reliability testing since the measure

is theoretically more oriented to comparable exactness between the scores as opposed to variation between the scores in the correlation approach.

Lombard et al. (2002a) reviewed various methods for conducting reliability tests. The procedures include percentage agreements, Holsti's (1969) method, Scott's (1955) pi [π], Cohen's Kappa [κ] (Cohen, 1960, Cohen, 1968) and Bennett et al's (1954) S [S]. Others include Fleiss' K [K] (Fleiss, 1971, Siegel and Castellan, 1988), Cronbach's (1951) Alpha [C-α] and Krippendorff's (1980) Alpha [K-α]. Lombard et al. (2002a) further adds that despite the many estimates for reliability, none has been known to be the best measure for reliability. This research employs the K-α. The K-α technique employs the inter coder technique which involves agreement with independent coders of the same data. Tinsley and Weiss (2000) for instance consider this method to be a more appropriate measure for reliability than employing variation examinations.

There are several advantages of using the K-α technique compared to the other options. The technique allows for any number of coders, the method is applicable to different levels of measurement; it is also applicable to different types of measurement (nominal, ordinal, interval and ratios). Finally complete or incomplete data may be computed using the method. Krippendorff (2004a) also argues that using the method, the K-α may be customised in order to suit the nature of the data sets under study. Kyeyune (2010) suggests that other methods are highly specialised and therefore restrictions apply in their usability. Similar to π, the K-α technique accounts for instances where there are agreements by chance. Hayes and Krippendorff (2007) add that the K-α treats observers as being freely permutable since the process involves matrix pairing which is based on scores rather than the quantity of coders involved. K-α is explicit in expressing the measure of reliability,

perfect reliability is rated [1] and perfect unreliability is rated [0]. Although this method appears to have several advantages, it has a very complicated computation procedure as described below.

As a rule of thumb regardless of the technique employed to measure the level of reliability, the widely accepted levels for data to be deemed as reliable is when the rate lies between 0.70 and 1.00 according to Neuendorf (2002). Other authors such as (Beattie et al., 2004a, Boyatzis, 1998, Guthrie and Matthews, 1985) are in agreement with the range of 0.70 to 1.00 for a reliable data set. According to Krippendorff (2004a), the procedure for computing K-α is as follows:

α's general form is:

$$\alpha = 1 - \frac{D_o}{D_e}$$

Where: D_o is the observed disagreement:

$$D_o = \frac{1}{n} \sum_c \sum_k o_{ck\,\text{metric}} \delta^2_{ck}$$

D_e is the disagreement one would expect when the coding of units is attributable to chance rather than to the properties of these units:

$$D_e = \frac{1}{n(n-1)} \sum_c \sum_k n_c \cdot n_{k\,\text{metric}} \delta^2_{ck}$$

Where:

c and *k*	represent the coded values from coders *c* and *k* in the reliability matrix
n	refers to the number of values in the reliability data matrix
o_{ck} and δ_{ck}	surrogate for observed coincidences and the difference function

6.8.3.2.1 Reliability of the Scoring Technique

In order to conduct the reliability tests, three coders with a strong accounting and finance background were invited. The three coders involved were informed about the background and objectives of the study. Beattie and Thomson (2007) identified among many issues, the problems with word count (e.g. font variations, disclosures in graphs, annotations and pictures format), and they proposed relevant coding rules. For the same reason, the independent coders for this study were trained on the scoring technique that was employed for this study including the decision making process with use of both literature and illustrations. Several studies that concur with the use of professionals in the process of inter coder reliability checks were identified and similar measures have been adopted for this study (see Beattie et al., 2004b, Beattie and Thomson, 2007, Kyeyune, 2010). The use of inter coders for reliability enhances the quality of the output by ensuring that there is a certain level of consistency in the data used for the study.

Three templates for the scoring process were developed; the templates covered the dichotomous scoring system, the word count methodology and the comprehensiveness methodology. These templates were sent out to each of the coders including a summary of the decision rules on scoring the annual reports. Twenty annual (ten private limited and ten public listed companies) reports were then selected using the random sampling tool on Microsoft Excel. Of the twenty reports selected, two coders were assigned seven and the third assigned six annual reports to score under the three identified categories (dichotomous, word count and comprehensiveness). The scores from the coders were then compared to the scores that were recorded by the researcher for the respective annual reports using Krippendorff's Alpha, Scott's Pi and Cohen's Kappa. The results of the tests,

including the percentages of agreement are outlined in the Tables 9 and 10. Appendix 1 and 2 contain the scores awarded by the inter-raters prior to computing the reliability results.

Table 9: Reliability Results for Annual Reports Scoring: Private Limited Companies

Company	Percentage Agreement	Scott's Pi	Cohen's Kappa	Krippendorff's Alpha	N Agreements	N Disagreements	N Cases	N Decisions
Anglian Water	93.75	0.92873	0.92889	0.93096	15	1	16	32
Associated British Ports	87.50	0.86266	0.86325	0.86695	14	2	16	32
Aston Martin	81.25	0.76978	0.77251	0.77698	13	3	16	32
Barchester Healthcare Limited	81.25	0.76755	0.77033	0.77482	13	3	16	32
Bargain Booze	81.25	0.79399	0.79574	0.80043	13	3	16	32
C&J Clarke	81.25	0.79531	0.79661	0.80171	13	3	16	32
Halcrow Holdings Limited	87.50	0.85388	0.85455	0.85845	14	2	16	32
John Laing	93.75	0.92252	0.92271	0.92494	15	1	16	32
Kwik Fit	81.25	0.79443	0.79574	0.80086	13	3	16	32
Manchester United	87.50	0.85965	0.86026	0.86404	14	2	16	32
Martin McColl	93.75	0.92326	0.92344	0.92566	15	1	16	32
Monsoon	93.75	0.92326	0.92344	0.92566	15	1	16	32
New Look	93.75	0.92471	0.92488	0.92706	15	1	16	32
PA Consulting	87.50	0.85388	0.85455	0.85845	14	2	16	32
Shop Direct	87.50	0.84834	0.84906	0.85308	14	2	16	32
Spire Healthcare	75.00	0.72650	0.72881	0.73504	12	4	16	32
Stewart Milne	93.75	0.92326	0.92344	0.92566	15	1	16	32
Unipart Group	93.75	0.92873	0.92889	0.93096	15	1	16	32
Virgin Atlantic	87.50	0.85455	0.85586	0.85909	14	2	16	32
Wilkinson	87.50	0.86383	0.86441	0.86809	14	2	16	32

Table 10: Reliability Results for Annual Reports Scoring: Public Listed Companies

Company	Percentage Agreement	Scott's Pi	Cohen's Kappa	Krippendorff's Alpha	N Agreements	N Disagreements	N Cases	N Decisions
Babcock International	93.75	0.93177	0.93191	0.93390	15	1	16	32
BP	87.50	0.86383	0.86441	0.86809	14	2	16	32
Cable and Wireless	87.50	0.86383	0.86441	0.86809	14	2	16	32
Chloride Group	93.75	0.92873	0.92889	0.93096	15	1	16	32
Dairy Crest Group	93.75	0.92326	0.92344	0.92566	15	1	16	32
Debenhams	75.00	0.72591	0.72881	0.73448	12	4	16	32
Dominos Pizza	93.75	0.93177	0.93191	0.93390	15	1	16	32
G4S	93.75	0.92998	0.93013	0.93217	15	1	16	32
Intercontinental Hotels	87.50	0.86611	0.86667	0.87029	14	2	16	32
JD Wetherspoons	93.75	0.93177	0.93191	0.93390	15	1	16	32
Ladbrokes	87.50	0.85520	0.85586	0.85973	14	2	16	32
Michael Page	81.25	0.78523	0.78667	0.79195	13	3	16	32
Millenium and Copthorne	87.50	0.84762	0.84834	0.85238	14	2	16	32
Misys	81.25	0.79618	0.79747	0.80255	13	3	16	32
Paypoint	87.50	0.85903	0.85965	0.86344	14	2	16	32
Persimmon	87.50	0.85965	0.86087	0.86404	14	2	16	32
Reed Elsevier	93.75	0.92541	0.92558	0.92774	15	1	16	32
Rentokil Initial	81.25	0.78808	0.78947	0.79470	13	3	16	32
Royal Dutch Shell	87.50	0.86207	0.86266	0.86638	14	2	16	32
Smith and Nephew	87.50	0.86266	0.86325	0.86695	14	2	16	32

Riffe et al. (2005) takes the view that independent scores would need to be above a minimum 80% threshold for content analysis to be considered reliable. Nuendorf (2011) in a more recent study states that acceptable rates of reliability lie between 0.7 and 1; It be concluded that the data used for this study is reliable as it meets the recommended thresholds. The results are also in line with prior disclosure studies on financial reports (e.g. Beattie et al., 2004b, Kyeyune, 2010) who found reliability results ranging between the 0.7-1 remits. Due to the criteria being met, it may be suggested that the level of reliability results may be attributed to factors such as the use of professionals in the area of study; provision of background information and adequate training on the disclosure measurement tool, the methodology and decision rules.

Two of the inter coders often referred to the decision rules that were supplied and found them very useful in the process. Another issue that was identified that may contribute to a descent reliability score is through avoiding the use of likert scale type scores based on subjectivity. This study assigned a score of [1] every time an attribute of interest was identified, this helped in eliminating subjectivity. Li et al. (2008b) in support of this argument also highlight the fact that prior disclosure studies have adopted the dichotomous (0:1) coding scheme in measuring disclosure, this method mainly checks for presence/absence (e.g. Guthrie and Petty, 2000, Brennan, 2001). There are however some disclosure studies that have used weighted coding schemes, which give uneven scores for quantitative and qualitative information (e.g. Bozzolan et al., 2003, Sujan and Abeysekera, 2007). In this study, items were not weighted because of potential scoring bias and scaling problems, the method adopted is consistent with that used in Cooke's (1989a) study.

6.8.3.2.2 Reliability of the Regression Models

The reliability of any model revolves around the assumptions of regression being violated or not. Analysing the residuals can be used to examine any violations in the models employed. In order to check for the linearity of the independent variables with the dependent variables, a plot of the predicted residuals should not illustrate a relationship between the two measures. Patterns in the plots would therefore point out that the linearity assumption was violated. The plots for the models are attached in the appendices section of the study. Apart from the normality assumptions and multicollinearity conditions already discussed in this chapter and examined in the results chapter, Field (2009) suggests testing for the impact of outliers and externalities. To test for linearity and homoscedasticity of the models, the regression-standardised plots are examined for each of the models and attached in the appendices section. The descriptive statistics in the results and analysis chapter discuss the distributive characteristics of the dependent and independent variables in greater detail.

Externalities refer those variables that are outside of the regression models but have the potential to influence the power of the predictors. Kyeyune (2010) notes that some of these predictors are at times included in the regression model as the error term. It is however important to acknowledge that it is impossible to identify and establish all the externalities and their respective impact to the model. Their association with predictors may lead to misspecification of the model. Sensitivity analysis will also be undertaken in order to verify the reliability of the results of the regression analysis. The tests to be carried out in the study include industry and family ownership for all the models. The F-statistic part of the FZT

computator will be applied to compare the main results and the result of the models that include the sensitivity test dummy variables

6.9 Summary and Concluding Remarks

The main purpose of the data and methodology chapter was to describe the various steps taken from data gathering through to the testing of the hypotheses. The chapter commenced by describing the study with focus on the selection and justification of the sample. This was followed by describing the disclosure measurement and the disclosure index. The scoring techniques employed and the methods of estimating the dependent variables followed. The operationalization of the independent variables was then covered prior to a discussion of the hypothesis testing. The choice of statistical tests and validity & reliability considerations were then discussed to close the chapter. The next chapter presents and discusses the results of the association between corporate governance mechanisms and company characteristics with the disclosure of KPIs in the annual reports of large private and large public listed UK companies.

Chapter 7

Hypotheses Testing, Results and Discussion:

Private Limited Companies

7 Hypotheses Testing, Results and Discussion: Private Limited Companies

7.1 Introduction

This chapter is important because it provides evidence of KPI disclosure trends and the relationship between KPI disclosures and selected independent variables among private limited firms. There are very few identifiable studies that have investigated disclosures among private limited companies in the UK, some of these few include Firth (1979) and Tauringana (1997). This study is the first to provide evidence in the UK between large private limited company KPI disclosures and selected independent variables. The results of the study pertaining to large private limited companies operating in the UK are discussed henceforth.

The chapter is organised as follows. Section 7.2 discusses the extent of KPI disclosures in annual reports and the independent variable descriptive statistics. Section 7.3 summarises the logistic regression results. The correlation results and regression results are covered in sections 7.4 and 7.5 respectively. A discussion of the findings is in section 7.6 followed by analysis of the diagnostic procedures in section 7.7. The chapter closes with summary and concluding remarks in section 7.8.

7.2 Descriptive Statistics

None of the identified studies have investigated the extent of KPI disclosures among private firms. This study will make a contribution in that area and extends further investigations in the later stages of this chapter. Out of the 205 private limited companies investigated, 104 disclosed at least a single KPI in their annual reports. 101 did not disclose any KPIs therefore only 50.7% of the private limited firms investigated disclosed KPIs. It may be argued that private limited firms are not

in the public interest and therefore their information disclosure is limited to its closest stakeholder groups, as opposed to the case of public listed firms where information is easily available and of direct interest to public shareholders. This statistic is however an interesting find in light of the regulations under CA 2006 for companies to report on their KPIs. This regulation is binding to all large public and private limited entities. One may therefore expect the levels of disclosure to have very little variation between the two types of companies.

Table 11 illustrates some descriptive statistics for the sample of two hundred and five private companies. The variables that were used to estimate the influencing factors of KPI disclosures are also described in this section. From the results it may be seen that the level of comprehensiveness in the disclosed KPIs is approximately 31% according to the scale designed in this study. The scale takes into account the presence of KPIs, amount and comparison, forward looking attributes and the reason for the performance. This is significantly lower than approximately 66% reported for large public listed companies. Private limited companies according to the investigation have approximately four non-executive directors on their board and public companies have two more than that figure.

Audit committees in private companies comprise approximately three individuals which is just one less than in large public listed companies. It was also found that there was very little difference between the frequencies of board meetings held by both sets of companies. Private limited companies on average hold approximately seven board meetings per year while public listed companies hold approximately eight board meetings per year as reported in their annual reports. Finally under corporate governance mechanisms, it was found that private limited

companies have an average board size of seven individuals of which on average, approximately 40% of their board members have financial expertise.

Table 11: Descriptive Results of Variables

		KPISCORE	WCOUNT	COMP	PNED	AUDSIZE	BOARDM	FINEXP	BDSIZE	DSHARE	SIZE	GEAR	PROF	LQDT	MULTIN
N	Valid	205	205	205	205	205	205	205	205	205	205	205	205	205	205
Mean		.0267	.0086	.3078	.3852	3.2766	7.4638	.4098	7.2681	.2064	429.285	1.97	.0122	1.1213	.4936
Std. Error of Mean		.00203	.00083	.02175	.01439	.09216	.17187	.01406	.20611	.01858	211.652	.22612	.00979	.06887	.03268
Median		.0158	.0019	.2300	.4000	3.0000	8.0000	.3750	7.0000	.0232	.4000	.6475	.0205	.9400	.0000
Mode		.00	.00	.00	.00	3.00	9.00	.33	9.00	.00	.12[a]	.35	.00	.92[a]	.00
Std. Deviation		.03110	.01270	.33347	.22057	1.41273	2.63478	.21554	3.15965	.28482	3244.568	3.46640	.15006	1.05578	.50103
Variance		.001	.000	.111	.049	1.996	6.942	.046	9.983	.081	10527223	12.016	.023	1.115	.251
Skewness		.870	2.875	.419	-.030	-.143	-.620	.751	1.587	1.262	10.919	3.520	-1.511	6.411	.026
Std. Error of Skewness		.159	.159	.159	.159	.159	.159	.159	.159	.159	.159	.159	.159	.159	.159
Kurtosis		-.063	13.483	-1.412	-.645	2.404	.654	.882	12.623	.501	132.991	15.853	8.432	64.510	-2.017
Std. Error of Kurtosis		.316	.316	.316	.316	.316	.316	.316	.316	.316	.316	.316	.316	.316	.316
Range		.13	.09	1.00	1.00	10.00	12.00	1.00	30.00	1.00	42944.00	27.21	1.36	12.77	1.00
Minimum		.00	.00	.00	.00	.00	.00	.00	1.00	.00	.00	-.42	-.87	.02	.00
Maximum		.13	.09	1.00	1.00	10.00	12.00	1.00	31.00	1.00	42944.00	26.79	.48	12.79	1.00
Percentiles	25	.0000	.0000	.0000	.2222	3.0000	6.0000	.2500	5.0000	.0002	.1496	.2016	-.0024	.6000	.0000
	50	.0158	.0019	.2300	.4000	3.0000	8.0000	.3750	7.0000	.0232	.4000	.6475	.0205	.9400	.0000
	75	.0492	.0147	.6000	.5556	4.0000	9.0000	.5556	9.0000	.3712	1.0420	2.0666	.0502	1.3100	1.0000

a: Multiple models exist. The smallest value is shown.

7.3 Summary of Logistic Regression Results

Since the extent of disclosure for private limited companies was approximately 51%, logistic regression was conducted in order to identify the variables that influence the disclosure and non-disclosure of KPIs by the 205 sample of private companies. The logistic regression results are supplementary to this study and therefore have been placed in appendix 3. However to summarise, the Cox & Snell and Nagelkerke R^2 were 51.3% and 71.1% respectively. The coefficients results revealed that company size and multinationality positively determine the disclosure of KPIs at the 95% level of confidence. The frequency of board meetings, board size, gearing ratio and profitability ratio positively determine the disclosure of KPIs in annual reports of private companies at the 99% level of confidence. Finally, the proportion on non-executive directors and audit committee size negatively determine the disclosure of KPIs by private limited companies. The following sections 7.4, 7.5 and 7.6 on correlation analysis, diagnostic procedures and multiple regression results respectively, are based on the 104 private limited companies that disclosed KPIs in their annual reports.

7.4 Correlation Analysis

Table 12 presents the correlation results for the private limited companies. The correlation matrices have been drawn up to illustrate the relationship between the predictors and the outcome and also as a preliminary check for multicollinearity (Field, 2009). Field (2009) suggests that high correlation (R>0.9: where R is the correlation coefficient) increases the chance that a good predictor may be misspecified. Even though the correlation coefficients are significant, the matrices

revealed that there is no high correlation between the predictors. The Table 12 below amalgamates all the dependent variables to be used in the three[44] different models investigated in this chapter. KPISCORE and WCOUNT have a correlation of .652; KPISCORE and COMP have a correlation of .762 & WCOUNT and COMP a correlation of .619. These correlations are all significant at the 0.001 level but it must be noted that they are all amongst dependent variables which are computed in three separate models hence there should not be any multicollinearity issues arising.

[44] Dependent variables include: (i) KPI score, (ii) Word count and (iii) Comprehensiveness.

Table 12: Correlation Matrix

	KPISCORE	WCOUNT	COMP	PNED	AUDSIZE	BOARDM	FINEXP	BDSIZE	DSHARE	COSIZE	GEAR	PROF	LQDT	MULTIN
KPISCORE	1													
WCOUNT	.652**	1												
COMP	.762**	.619**	1											
PNED	-.010	.063	.003	1										
AUDSIZE	-.008	-.032	-.019	.278**	1									
BOARDM	.041	.039	.078	.118	.302**	1								
FINEXP	.006	-.003	-.035	-.042	-.241**	-.139*	1							
BDSIZE	.041	.008	.010	.301**	.755**	.261**	-.214**	1						
DSHARE	-.066	-.056	-.021	-.007	-.147*	-.073	.046	-.099	1					
COSIZE	.006	.071	.010	.123	.296**	.074	-.049	.423**	-.085	1				
GEAR	.055	-.031	.022	.025	-.031	.019	-.034	-.023	-.048	.010	1			
PROF	.033	.021	-.001	.022	.037	-.079	-.050	.065	.029	.065	-.169**	1		
LQDT	.042	-.027	.018	-.006	.055	.040	.040	.046	-.030	-.051	-.056	.066	1	
MULTIN	.045	.025	.110	-.144*	-.037	-.045	-.033	-.081	-.127	-.010	.101	-.051	-.050	1

$N^{45} = 104$

**. Correlation is significant at the 0.01 level (2-tailed)

*. Correlation is significant at the 0.05 level (2-tailed)

[45] Only companies that disclosed KPIs were considered for the correlation analysis and the same subsample was used for the OLS regression computation.

BDSIZE and AUDSIZE are however observed to have a correlation of .755; it makes sense that larger boards are more likely to have a larger number of members on the audit committee. Despite the correlation, the statistic is below 0.9 therefore should not be a cause for concern according to Field (2009).

7.5 Diagnostic Procedures

Four checks were made for the diagnostics prior to the regression simulations to ensure that none of the statistical assumptions were violated. The four checks conducted include assessing the standardised residual, Cooke's Distances, Durbin-Watson and normality distribution checks. According to Field (2009), standardised residuals should assume a normal distribution. According to the guidance on interpretation of standardised residuals; values exceeding 2.5 should constitute less than 1% of the sample and values exceeding 2.0 less than 5% of the sample. In the cases of KPISCORE, WCOUNT and COMP; only 2, 1, and 0 cases exceeded 2.0 respectively. As for the upper limit results for KPISCORE, WCOUNT and COMP show that 0, 2, and 0 cases exceeded 2.5 respectively.

The statistics of the standardised residuals do not violate the 1% or the 5% guidance. The Cook's distance was the next diagnostic check that was conducted. This was done for all three models KPISCORE, WCOUNT and COMP. The maximum values observed for the Cooks distance were 0.157, 0.348 and 0.2. Cook's distances that over 1.0 are a cause for concern according to (Cook and Weisberg, 1980, Cook and Weisberg, 1982, Lawrence, 1995) and this rule is not violated by the data sets concerned. The Durbin-Watson test was conducted and the rule of thumb states that researcher should be concerned if the values for the statistic are <1 or >3. The relevant results for KPISCORE, WCOUNT and COMP were 1.799,

1.629 and 2.084 respectively. Appendix 4 demonstrates that the data used for the study are normally distributed through the normal curve on the graphs. The average VIF results showed that the relevant scores for KPI, WCOUNT and COMP were 1.4, 1.704 and 1.55 respectively. None of the scores were substantially greater than 1 therefore there were no strong linear relationships among the predictors.

7.6 Multiple Regression Results

The results for this chapter have been split into four sections. Initially the researcher set out to investigate the characteristics of the companies that are likely to disclose KPIs in their annual reports. From the observations it was noted that approximately 51% of the private limited companies under investigation disclosed at least a single KPI in their annual report. For this reason logistic regression was applied to determine the characteristics of those companies that are likely to disclose KPIs. OLS regression was then applied only to those companies that had made disclosures. The logistic regression results are attached in Appendix 3. The dependent variables tested under OLS Regression include (i) KPI score, (ii) Word count and (iii) Comprehensiveness.

7.6.1 OLS Regression Results

In the next set of regression results, only those companies disclosing KPIs among the private limited firms investigated were considered. This was done in this section as independent variables were tested against whether they influence the level of KPI disclosures and disclosure comprehensiveness as opposed to checking whether selected independent variables influence disclosure or non-disclosure alone

as in the previous section. The following regression models were employed under OLS Regression:

$$KPISCORE = \beta_0 + \beta_1 PNED + \beta_2 AUDSIZE + \beta_3 BDMEET + \beta_4 FINEXP + \beta_5 BDSIZE + \beta_6 DSHARE + \beta_7 COSIZE + \beta_8 GEAR + \beta_9 PROF + \beta_{10} LQDT + \beta_{11} MULTIN + \varepsilon_j$$

$$WCOUNT = \beta_0 + \beta_1 PNED + \beta_2 AUDSIZE + \beta_3 BDMEET + \beta_4 FINEXP + \beta_5 BDSIZE + \beta_6 DSHARE + \beta_7 COSIZE + \beta_8 GEAR + \beta_9 PROF + \beta_{10} LQDT + \beta_{11} MULTIN + \varepsilon_j$$

$$COMP = \beta_0 + \beta_1 PNED + \beta_2 AUDSIZE + \beta_3 BDMEET + \beta_4 FINEXP + \beta_5 BDSIZE + \beta_6 DSHARE + \beta_7 COSIZE + \beta_8 GEAR + \beta_9 PROF + \beta_{10} LQDT + \beta_{11} MULTIN + \varepsilon_j$$

Identification of variables as per Table 13. Table 14 represents the results attained form the three models above.

Table 13: Explanation of Variables

Variable	*Explanation*
β_0.....β_{11}	Regressors/regression coefficients
KPI	KPI disclosure; [1] where at least a single KPI is disclosed and [0] where no KPI disclosures have been made
KPISCORE	Level of KPI disclosures in annual reports as a proportion of a selected disclosure index
WCOUNT	Percentage of words used to describe KPIs as a proportion of the total number of words in the annual report
COMP	Measure of disclosure quality taking into account (i) presence of KPIs, (ii) amounts, (iii) reason for changes/trends and (iv) forward looking disclosures
PNED	Proportion on non-executive directors on the board
AUDSIZE	Audit committee size
BDMEET	Frequency of board meetings held during the year
FINEXP	Proportion of financial experts on the board of directors
BDSIZE	Total number of individuals on the board of directors
DSHARE	Director share ownership
COSIZE	Company size measured by total assets
GEAR	Gearing
PROF	Profitability
LQDT	Liquidity
MULTIN	Multinationality (code [1] awarded if company has substantial operations outside GB, code [0] if not)

Table 14: OLS Regression Results

	KPISCORE					WCOUNT					COMP				
	Unstandardized Coefficients		Standardized Coefficients			Unstandardized Coefficients		Standardized Coefficients			Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.	B	Std. Error	Beta	t	Sig.	B	Std. Error	Beta	t	Sig.
(Constant)	.045	.008		5.891	.000	.016	.003		4.694	.000	.632	.066		9.513	.000
PNED	-.016	.007	-.163	-2.240	.028	.012	.003	.297	3.675	.000	-.101	.059	-.150	-1.695	.093
AUDSIZE	.001	.002	.083	.774	.441	.001	.001	.231	1.634	.106	-.002	.016	-.018	-.118	.906
BOARDM	-.003	.001	-.393	-4.516	.000	.001	.000	.155	1.769	.080	-.006	.006	-.093	-.986	.327
FINEXP	.016	.007	.165	2.193	.031	-.001	.003	-.032	-.403	.688	-.101	.065	-.139	-1.551	.124
BDSIZE	.003	.001	.369	3.260	.002	-.002	.000	-.605	-3.786	.000	.007	.007	.151	.991	.324
DSHARE	-.004	.006	-.051	-.699	.486	-.010	.002	-.348	-4.461	.000	.106	.047	.191	2.227	.028
COSIZE	.001	.000	.301	4.059	.000	.000	.000	.359	3.465	.001	.000	.000	.143	1.681	.096
GEAR	.001	.000	.160	2.222	.029	.000	.000	-.195	-2.477	.015	-.004	.003	-.105	-1.191	.237
PROF	.020	.010	.155	2.014	.047	.017	.004	.317	4.064	.000	.276	.079	.301	3.512	.001
LQDT	.001	.001	.041	.571	.569	.001	.001	.128	1.638	.105	.033	.010	.281	3.304	.001
MULTIN	.000	.003	.006	.085	.933	.001	.001	.032	.395	.694	.048	.028	.150	1.747	.084
R sq.			.558					.476					.384		
R sq. adj.			.505					.413					.311		
St Error			.01601					.00684					.13364		
F Change			10.566					7.599					5.219		
Sig F change			.000					.000					.000		

7.6.1.1 KPISCORE Regression Results

The results reveal a 50.5% explanatory power of the variables tested. According to the results of the regression, BDSIZE, COSIZE, GEAR, FINEXP and PROF were found to have a positive and significant relationship with the level of KPI disclosures. PNED and BOARDM were found to have a negative significant relationship with the level of KPI disclosures among large private limited companies. COSIZE was found among the companies that disclose KPIs that such companies also tend to disclose a relatively larger amount of KPIs in their reports compared to smaller companies that disclose KPIs. This finding is in line with the hypothesis (H^{7a}) and the rationale according to the hypothesis. Such firms have greater resources to finance dissipation of vast amounts of information. Larger companies also being in the limelight would aim to attract investors via detailed information of their critical success factors explained through KPIs (Alsaeed, 2006, Ismail and Ibrahim, 2008). COSIZE was found to have a significant and positive correlation with the level of KPI disclosures at the 0.01 level. COSIZE was also found to significantly explain the comprehensiveness of KPI disclosures in annual reports as stated in section 7.5.1.3.

Akerlof (1970) described companies that post low profitability results as bad lemons. When a company performs to a high standard in terms of profitability then it is likely to wish to report those results. The results from the regressions suggest that there is positive and significant relationship between profitability and the level of KPI disclosures among the large private companies that disclose KPIs. This finding is in line with the hypothesis (H^{9a}) formulated. As earlier mentioned, some companies will for instance, borrow money with the view to participate in investment opportunities that have arisen. Such companies are likely to disclose information

about these investment prospects to their concerned stakeholders. GEAR was found to be positively and significantly related to the level of KPI disclosures among the companies that disclose KPIs (Barako et al., 2006a, Camfferman and Cooke, 2002). It may be suggested that private companies though having a smaller investor base, those investors have more power than within public listed entities therefore would demand information about the leverage position of the firm particularly if it appears to be a cause for concern. This finding is in line with the hypothesis (H^{8a}) developed and should be accepted. It has also been posited by many studies (Fama and Miller, 1972, Jensen and Meckling, 1976, Smith and Warner, 1979) that firms with higher levels of debt incur higher agency costs which can be mitigated by increased disclosure. Disclosure of the key performance drivers of the reporting company reduces monitoring costs.

The size of the board was found to be positively and significantly associated with the level of KPI disclosures by private companies that disclose KPIs; this is in line with the hypothesis (H^{5a}). Larger boards may be thought of as ones that offer more vigorous scrutiny as far as company performance is concerned. This level of scrutiny is likely to result in increased disclosure of the critical success factors of the business entity in the form of KPIs in the annual reports. The proportion of finance experts on the board positively and significantly explains KPI disclosures. This finding is in line with the hypothesis (H^{4a}). A higher proportion of finance experts on the board are perceived as a sign of enhanced financial reporting. Finance experts are likely to provide detailed explanations of the accounts and financial key performance indicators. The proportion of non-executive directors was found to have a negative significant relationship with the level of KPI disclosures by private limited companies that report KPIs. This finding was against the hypothesised

direction of the relationship (H^{1a}). Non-executive directors within private limited companies are likely to compromise with the policies and philosophies of the reporting entity as a consequence of their close relationship with the management. Chen and Jaggi (2000) suggest that the appointment of non-executive directors in some settings is likely due to close relationships. This situation is less likely in the case of public listed companies. These results are consistent with other previous research to find a negative relationship between the proportion of non-executive directors and disclosure extent (e.g. Haniffa and Cooke, 2002, Eng and Mak, 2003, Barako et al., 2006a). Although MULTIN was found to significantly influence whether private companies disclose KPIs or not, it was not significantly influential in determining how much disclosure is then made by the reporting companies. AUDSIZE and DSHARE are not significantly related to the levels of KPI disclosures by reporting firms.

7.6.1.2 Word Count Regression Results

The results of the multiple regressions reveal that the adjusted R^2 is 41.3%. The word count used in describing KPIs was used as a proxy for measuring disclosure quantity. The assumption being that where more words are used to describe KPIs then more details are likely to be reported. There are some similarities with the results found for the level of KPI disclosures despite different measures being applied. However the rationale behind the relationships is largely similar. Such similar findings include a significant relationships being found between WCOUNT and four different variables; BDSIZE, DSHARE, COSIZE and PROF. PNED is significantly positively associated with the amount of words used in describing KPIs as hypothesised (H^{1a}). This result may suggest that non-executive

directors despite disclosing fewer KPIs as seen from the results of the relationship between KPISCORE and PNED; will in fact use more words in their descriptions of the KPIs disclosed. Since they are not involved in the day to day running of the company, it is possible that they will demand detailed information of the management and in turn will encourage the disclosure of greater detail within each disclosed KPI. Tauringana (1997) among others found a positive association between the variable and voluntary disclosures. Non-executive board members often work within several organisations and they bring the skills they acquire over the years to the organisations they are involved with. This may result in key competences being formulated and highlighted as KPIs within the annual reports of private companies.

BOARDM was found to have a positive and significant relationship with WCOUNT. This is in line with the hypothesis (H^{3a}) formulated. Companies that have a higher number of board meetings are likely to iron out any discrepancies and also discuss issues in greater detail than those companies which have fewer meetings. As a consequence of this frequency, it may be expected that such companies with numerous board meetings would also provide more details in their KPI disclosures regardless of the amount of KPIs actually disclosed. It was hypothesised (H^{8a}) that there was a positive relationship between gearing and the extent of disclosures. H^{8a} is to be rejected because the results reveal that gearing is negatively and significantly related to the amount of words used in the description of disclosed KPIs. A possible explanation is that highly geared firms may wish to reveal very little in the way of detail about their gearing position although they might actually disclose a high number of KPIs as the gearing increases. PROF was found to be positively and significantly associated with disclosure extent hence hypothesis H^{9a} is accepted. In addition to the rationale provided earlier, the signalling theory suggests that

companies with superior performance are more likely to disclose increased information about their performance. Other studies have suggested that lemons (underperforming business entities) tend to disclose less information to avoid embarrassment and exposure of their poor performance (Akerlof, 1970). LQDT, MULTIN, FINEXP and AUDSIZE were found to have a weak relationship with WCOUNT.

7.6.1.3 Comprehensiveness Regression Results

The explanatory power of the model employed is 31.1%. According to the results of the study under comprehensiveness of KPI disclosures by private limited companies, the outcomes reveal that PNED, DHARE, COSIZE, PROF, LQDT and MULTIN are significantly associated with the level of comprehensiveness in the KPI disclosures made. The comprehensiveness is a measure that was used once again to check the quality of the KPIs that have been disclosed. In this case, comprehensiveness[46] considers four main aspects to the KPIs disclosed. COSIZE and PROF were observed to post similar results to those found for WCOUNT and KPIscore being positively and significantly associated with COMP therefore hypotheses H^{9a} and H^{7a} are to be accepted. On the balance of the arguments posited in the earlier sections under word count and KPISCORE, it appears that the rationale behind the disclosure patterns is similar. COSIZE was however found to be significant at the 90% level of confidence.

LQDT is positively and significantly associated with comprehensiveness of KPI disclosures in annual reports of private limited companies that disclose KPIs.

[46] The four aspects include (i) presence of KPI disclosures, (ii) amount, (iii) reasons for the changes and (iv) forward looking information.

This finding is in line with the hypothesis (H^{10a}) developed. Based on the results, firms that possess high levels of liquidity make KPI disclosures that are more comprehensive. Higher liquidity entails that firms have funds available to readily invest in business opportunities. Liquidity also provides stability as far as other stakeholders are concerned, for example suppliers. If comprehensive KPI disclosures are made, then it reduces any uncertainty and concerns regarding the financial position of the entity in question. It makes sense in this case to find that companies in admirable positions of liquidity will wish to disclose more information and more KPIs that include vital details.

MULTIN was positively and significantly found to be related to COMP at the 90% level of confidence. This finding was also in line with the hypothesis (H^{11a}) formulated. Although it was found that operating in different geographical regions does not necessarily influence whether a private limited company would disclose KPIs or not, it was however found that for those companies that disclose KPIs, operating in different geographical regions will have an influence on the comprehensiveness of the disclosures that those companies actually make. It can be reasonably expected that where a company operates outside of Great Britain, there might be specific attributes that are important to report in order to enhance the comprehensiveness of the annual report in addition to meeting the regulations of the locality. It is however an interesting point to note that if a private company operates in countries where the disclosure regulations are lax or less rigid than in the GB territory, such companies will not necessarily exhibit extra disclosures as a result. The results show a weak relationship between PNED and COMP. Other variables[47] investigated

[47] DSHARE, BDSIZE, FINEXP, BOARDM and AUDSIZE.

did not have significant association with the comprehensiveness of KPI disclosures in the annual reports of large private limited companies.

7.7 Discussion of Results

The section below summarises the findings from the OLS regression tests conducted. Table 15 identifies the variables that were found to be significant and highlights the level of significance too.

Table 15: Significance of Variables Across the Three Methods

Variable	KPISCORE	WCOUNT	COMP
PNED	Yes**	Yes***	Yes*
AUDSIZE	No	No	No
BOARDM	Yes***	Yes*	No
FINEXP	Yes**	No	No
BDSIZE	Yes**	Yes***	No
DSHARE	No	Yes***	Yes**
COSIZE	Yes***	Yes**	Yes*
GEAR	Yes**	Yes**	No
PROF	Yes**	Yes***	Yes**
LQDT	No	No	Yes**
MULTIN	No	No	Yes*

*. Variable significant at the 0.1 level.

**. Variable significant at the 0.05 level.

***. Variable significant at the 0.01 level.

From Table 15 it can be seen that COSIZE is significant across all three models. The results have all been positively associated with KPI disclosures. This finding is in line with other studies (Andrikopoulos and Kriklani, 2012a, Samaha et al., 2012b, Li et al., 2011). Larger companies have been considered to be in the lime

light and would hence endeavour to lead by example hence disclose more information in the annual reports. Larger firms may also attempt disclosing more information in an attempt to avoid increased regulation and consequently reducing monitoring costs. It has therefore previously been suggested that companies may increase disclosures as a means to self-regulate (Gray and Roberts, 1989). PROF and PNED have also been found to be significantly associated in all three models. Interesting revelations through the results include GEAR which was found to be significantly associated with KPI, KPISCORE and WCOUNT but not with COMP. This revelation suggests that when companies are in situations of high gearing, they are likely to disclose more KPI information but this information is carefully selected excluding some detail that might otherwise be a cause for concern among various stakeholders.

AUDSIZE was found to be significantly related to whether private companies chose to disclose KPIs or not. However this variable does not influence the comprehensiveness of the disclosures that are reported in the annual report. It appears from the findings that if there are larger audit committees within private companies then their information is subject to heavier scrutiny and such information is disclosed very cautiously. From the logistic regression results, it can be suggested that multinationality affects whether companies disclose KPIs or not. This variable is however only positively associated with the level of comprehensive disclosures therefore suggesting that companies operating in regions outside the GB territory are bound by specific regulations to which they ought to abide. BDSIZE and BOARDM are significantly associated with KPISCORE and WCOUNT but not the comprehensiveness of KPI disclosures. This finding suggests that more effort may need to be placed at board room level towards disclosing comprehensiveness

attributes in their disclosure as opposed to box ticking. LQDT is however only associated with the comprehensiveness of disclosures. This perhaps highlights the potential of the reporting entities through their KPIs by means of their liquid resources.

7.8 Summary and Concluding Remarks

This chapter had three main objectives which were firstly to investigate the level of KPI disclosures among large private limited firms. Secondly, a subsidiary objective of investigating those variables that influence private firms to disclose or not disclose KPIs in their annual reports. Finally, to investigate those variables which influence the extent and comprehensiveness of KPI disclosures in annual reports of large private companies. The study highlights that just over five in every ten large private firms disclose at least a single KPI in their annual reports. It was also found that there are several different factors that influence companies to disclose KPIs. One of the interesting revelations highlighted is that although some companies may disclose KPIs, the comprehensiveness of the disclosures may be very low. Some of the disclosures made may be a consequence of operating in a different geographical region therefore subject to specific regulations in the territory of trade.

However different factors influence the comprehensiveness of the disclosures that are then made. From a policy making perspective, it might be useful if private companies had specific minimum requirements in terms of attributes that should be addressed in the reporting of KPIs so that the information holds value as opposed to just barely meeting requirements. The next chapter will consider public listed companies and assess whether there are significant differences from the trends noted in this chapter. The disclosure regulations for KPIs are similar for all large

companies regardless of listing status therefore a direct comparison can be made. Any differences and similarities noted may be useful from a policy formulating perspective as findings may be useful to legislators and/or accounting standard setters who seek to control information flow in a firm but fair manner. This may be done in a way that is optimum to various stakeholders concerned without imposing constraints on the reporting business entities.

Chapter 8

Hypotheses Testing, Results and Discussion:

Public Listed Companies

8 Hypotheses Testing, Results and Discussion: Public Listed Companies

8.1 Introduction

This chapter presents results for the public listed companies investigated in this research. This chapter provides KPI disclosure evidence firstly by providing statistical data on the extent of KPI disclosures by large listed companies and secondly by providing evidence of the factors that influence KPI disclosures, amount of words used in descriptions and level of comprehensiveness of the KPI information disclosed. The dependent variables included in the investigation include KPI score, word count and comprehensiveness. The independent variables that were used in the investigation include corporate governance mechanisms (proportion of non-executive directors, audit committee size, board size and director share ownership) and company specific characteristics (company size measured as total assets, gearing, profitability, liquidity, multinationality and multiple listing).

The Chapter is organised as follows: The extent of disclosure and descriptive statistics are provided and explained in section 8.2. Correlation analysis and diagnostic procedure discussions are covered in sections 8.3 and 8.4 respectively. The results from the multiple regressions are provided next in section 8.5 providing evidence for KPI disclosure extent, word count and comprehensiveness. The regression findings are discussed in section 8.6. The chapter closes with a summary and conclusion in section 8.7.

8.2 Descriptive Statistics

From the research, it was found that 89.76% of the sample of 205 large public listed firms made KPI disclosures in their annual report. On average, large public listed company disclosed approximately eight KPIs in their annual reports. While some companies did not disclose any KPIs one company disclosed 23 KPIs (National Grid Plc.). Even though some companies are still not fully adhering to the requirements of the Business Review under the Companies Act 2006, statistics showed that the level of disclosures is high for public listed companies compared to approximately 51% in the case of large private limited companies. A standard deviation of approximately five KPIs demonstrates that there is not much variation from the average level of KPI disclosures made by this set of companies. Public listed companies report more comprehensive KPIs which score approximately 66% against the designed measure while on average private limited companies scored approximately 31%. The results also show that public listed companies use up approximately 1.03% of their annual reports describing KPI information while the figure is lower at approximately 0.86% for private limited companies.

Table 16 presents some descriptive statistics on the variables investigated. Based on the statistics it appears that the average board sizes for public listed companies (nine members) are larger than in the case of private limited companies (seven members). Large public listed companies also hold more frequent board meetings compared to private limited companies, each group reporting eight and seven meetings per annum respectively. Both public listed and private limited companies report a similar average level of gearing at approximately 190%. Finally, it was noted that approximately 76% of large public listed companies have

operations outside GB while the figure stood at 49% for large private limited companies.

Table 16: Descriptive Statistics of Variables

		KPISCORE	WCOUNT	COMP	PNED	AUDSIZE	BOARDM	FINEXP	BDSIZE	DSHARE	SIZE	GEAR	PROF	LQDT	MULTIN	LSTAT	MLIST
N	Valid	205	205	205	205	205	205	205	205	205	205	205	205	205	205	205	205
Mean		.0536	.0103	.6557	.6383	3.8372	8.4744	.4140	9.2977	.0287	4.9784	1.9624	.1184	1.0927	.7628	1.0000	.7953
Std. Error of Mean		.00254	.00075	.01805	.00824	.06102	.15176	.00934	.15228	.00638	1.01854	.36689	.01078	.07463	.02908	.00000	.02758
Median		.0465	.0082	.7400	.6250	4.0000	8.0000	.4167	9.0000	.0016	1.4660	.9660	.0992	.9100	1.0000	1.0000	1.0000
Mode		.00	.00	.00	.50	3.00[a]	8.00	.38[a]	9.00	.00	.00	.05[a]	.00[a]	.71	1.00	1.00	1.00
Std. Deviation		.03724	.01099	.26460	.12088	.89469	2.225	.13696	2.23288	.09359	14.9347	5.3796	.15810	1.09431	.42636	.00000	.40439
Variance		.001	.000	.070	.015	.800	4.951	.019	4.986	.009	223.046	28.940	.025	1.198	.182	.000	.164
Skewness		1.282	4.870	-1.195	-.003	.998	.308	.489	.795	4.952	9.564	7.874	.637	7.810	-1.244		-1.474
Std. Error of Skewness		.166	.166	.166	.166	.166	.166	.166	.166	.166	.166	.166	.166	.166	.166	.166	.166
Kurtosis		2.761	42.088	1.034	-.412	1.430	.539	1.053	.555	25.980	112.834	68.045	3.864	85.693	-.456		.176
Std. Error of Kurtosis		.330	.330	.330	.330	.330	.330	.330	.330	.330	.330	.330	.330	.330	.330	.330	.330
Range		.23	.12	1.00	.62	5.00	15.00	.82	12.00	.64	190.44	51.72	1.21	13.77	1.00	.00	1.00
Minimum		.00	.00	.00	.29	2.00	2.00	.08	5.00	.00	.00	-.04	-.44	.04	.00	1.00	.00
Maximum		.23	.12	1.00	.91	7.00	17.00	.90	17.00	.64	190.45	51.68	.77	13.81	1.00	1.00	1.00
Percentiles	25	.0303	.0039	.5400	.5556	3.0000	7.0000	.3333	8.0000	.0002	.4740	.4151	.0385	.6300	1.0000	1.0000	1.0000
	50	.0465	.0082	.7400	.6250	4.0000	8.0000	.4167	9.0000	.0016	1.4660	.9660	.0992	.9100	1.0000	1.0000	1.0000
	75	.0690	.0150	.8400	.7273	4.0000	10.0000	.5000	11.0000	.0086	4.6440	1.6769	.1817	1.2100	1.0000	1.0000	1.0000

a. Multiple modes exist. The smallest value is shown.

These descriptive statistics provide of a snapshot of the data collected for the purpose of this study and demonstrate key variations in the figures. The next analysis of the variables covers the correlation coefficients between the variables.

8.3 Correlation Analysis

The Table 17 provides a summary of the results for the correlation analysis of the variables investigated under listed companies. From the results, it can be identified that the independent variables are not highly correlated. It was important to conduct the correlation analysis before the tests of regression to avoid the problem of multicollinearity. Many previous authors have suggested that correlation needs to be above 0.90 to cause collinearity problems e.g. Field (2009). The researcher has however noted that there is inconsistent guidance on determining a high value of correlation. Eastman (1984) suggests to be watchful of an upper limit of +0.60, Saunders et al (2003) suggest +0.70, Judge et al (1985) suggest +0.80 and Field (2005, 2009) suggest +0.90. Due to the various suggestions, the researcher opted for the most up to date suggestion by Field (2009). From the Table 17 it can be seen that the highest correlation is that between WCOUNT and COSIZE. The correlation is .662 and is below the recommendation of +0.90 by Field (2009) therefore there is no risk of multicollinearity in the regression models.

Table 17: Correlation Matrix

	COMP	*KPISCORE*	*WCOUNT*	*PNED*	*AUDSIZE*	*BOARDM*	*FINEXP*	*BDSIZE*	*DSHARE*	*COSIZE*	*GEAR*	*PROF*	*LQDT*	*MULTIN*	*MLIST*
COMP	1														
KPISCORE	.376**	1													
WCOUNT	.399**	.234**	1												
PNED	.042	-.037	-.057	1											
AUDSIZE	-.008	-.008	.027	.071	1										
BOARDM	.024	.077	-.146*	-.004	.064	1									
FINEXP	.045	.014	-.024	.077	-.080	.002	1								
BDSIZE	.029	.082	-.045	.123	.275**	.012	-.109	1							
DSHARE	-.098	-.045	-.155*	.006	-.065	-.109	.013	-.050	1						
COSIZE	.155*	.160*	.662**	.103	.103	.003	-.032	.096	-.119	1					
GEAR	-.452**	-.227**	-.182**	.116	-.013	-.012	.012	.007	.048	-.081	1				
PROF	-.024	.055	-.026	.197**	.057	-.029	.056	.084	.042	.086	-.052	1			
LQDT	.087	.016	.035	.006	.089	-.101	.013	.101	.077	-.010	-.131	.390**	1		
MULTIN	.091	.013	.043	.073	.087	.068	.062	.076	.046	.118	.070	.032	.025	1	
MLIST	-.126	.026	-.065	.050	.050	.087	.034	.011	.001	.008	-.002	.090	.053	.020	1

** Correlation is significant at the 0.01 level (2 tailed).

* Correlation is significant at the 0.05 level (2 tailed).

8.4 Diagnostics Procedures

Some diagnostic checks were conducted for this study. The standard residuals were the first to be examined for all three models under scrutiny. Standard residuals assume normal distribution and Field (2009) offers some guidance on interpretation. The sample should not contain more than 1% of the constituents possessing a standardized residual of +2.5 and or more than 5% with a standardized residual of more than 2. When these situations exist, it suggests that the model is not an effective representation of actual data according to Field (2009). The results of this study show that for the KPISCORE model, 2 cases had a residual of more than 2.5 and 4 cases with a standard residual of greater than 2. The model for WCOUNT had 2 cases greater than 2 and none greater than 2.5. The third model for COMP reported 1 case greater than 2.5 and none greater than 2. All these statistics are below the 1% and 5% relevant thresholds hence the guidance was not violated.

The next diagnostic check that was conducted is the Cooke's distance. This statistic measures the overall influence of the cases within the model being computed. According to the guidelines, a value of greater than 1 should be a cause for concern (Cooke and Weisberg 1982). The minimum and maximum values as per the findings of this study for the Cooke's statistic under KPISCORE are .000 and .175 respectively, for the WCOUNT the relevant values are .000 and .651, finally for the COMP model the relevant statistics are .000 and .148 respectively. Another test that was conducted is the Durbin-Watson test. The rule of thumb for this test is that values under 1 or greater than 3 are a cause for concern. Under the three models KPISCORE, WCOUNT and COMP, the Durbin-Watson statistics were 1.913, 1.729 and 1.865 respectively. Also attached in the appendices are the histograms to illustrate normality, plot of standardized regression residual and scatterplots to

illustrate checks for heteroscedasticity. From the supporting illustrations Appendix 5 it can be seen that the overall check assumptions have not been violated. The average VIF results showed that the relevant scores for KPI, WCOUNT and COMP were 1.13, 1.095 and 1.192 respectively. None of the scores were substantially greater than 1 therefore there were no strong linear relationships among the predictors.

8.5 OLS Regression Results

Three regression equations were formulated to assess the influence of company specific characteristics and corporate governance mechanisms on (i) the extent of KPIs disclosures in annual reports, (ii) the amount of words used in describing the disclosed KPIs and (iii) the comprehensiveness of KPI disclosures by UK listed companies. The following multiple regression models were used:

$$KPISCORE = \beta_0 + \beta_1 PNED + \beta_2 AUDSIZE + \beta_3 BOARDM + \beta_4 FINEXP + \beta_5 BDSIZE + \beta_6 DSHARE + \beta_7 COSIZE + \beta_8 GEAR + \beta_9 PROF + \beta_{10} LQDT + \beta_{11} MULTIN + \beta_{12} MLIST + \varepsilon_j$$

$$WCOUNT = \beta_0 + \beta_1 PNED + \beta_2 AUDSIZE + \beta_3 BOARDM + \beta_4 FINEXP + \beta_5 BDSIZE + \beta_6 DSHARE + \beta_7 COSIZE + \beta_8 GEAR + \beta_9 PROF + \beta_{10} LQDT + \beta_{11} MULTIN + \beta_{12} MLIST + \varepsilon_j$$

$$WCOUNT = \beta_0 + \beta_1\ PNED + \beta_2\ AUDSIZE + \beta_3\ BOARDM + \beta_4\ FINEXP + \beta_5\ BDSIZE + \beta_6\ DSHARE + \beta_7\ COSIZE + \beta_8\ GEAR + \beta_9\ PROF + \beta_{10}\ LQDT + \beta_{11}\ MULTIN + \beta_{12}\ MLIST + \varepsilon_j$$

Table 18 identifies the variables included in the equation:

Table 18: Explanation of Variables

Variable	Explanation
β_0.....β_{12}	Regressors/regression coefficients
KPI	KPI disclosure; [1] where at least a single KPI is disclosed and [0] where no KPI disclosures have been made
KPISCORE	Level of KPI disclosures in annual reports as a proportion of a selected disclosure index
WCOUNT	Percentage of words used to describe KPIs as a proportion of the total number of words in the annual report
COMP	Measure of disclosure quality taking into account (i) presence of KPIs, (ii) amounts, (iii) reason for changes/trends and (iv) forward looking disclosures
PNED	Proportion on non-executive directors on the board
AUDSIZE	Audit committee size
BDMEET	Frequency of board meetings held during the year
FINEXP	Proportion of financial experts on the board of directors
BDSIZE	Total number of individuals on the board of directors
DSHARE	Director share ownership
COSIZE	Company size measured by total assets
GEAR	Gearing
PROF	Profitability
LQDT	Liquidity
MULTIN	Multinationality (code [1] awarded if company has substantial operations outside GB, code [0] if not)
MLIST	Multiple listing status (code [1] if a company is listed on more than one stock exchange and [0] if listed on just one or none.)

Table 19: Multiple Regression Results

	KPISCORE					**WCOUNT**					**COMP**				
	Unstandardized Coefficients		**Standardized Coefficients**			**Unstandardized Coefficients**		**Standardized Coefficients**			**Unstandardized Coefficients**		**Standardized Coefficients**		
	B	*Std. Error*	*Beta*	*t*	*sig*	*B*	*Std. Error*	*Beta*	*T*	*sig*	*B*	*Std. Error*	*Beta*	*t*	*sig*
(Constant)	.017	.018		.968	.334	.019	.004		4.482	.000	.386	.134		2.885	.004
PNED	-.040	.016	-.138	-2.455	.015	-.006	.004	-.076	-1.463	.145	.274	.131	.131	2.096	.037
AUDSIZE	-.002	.002	-.039	-.688	.492	.000	.001	.020	.397	.692	-.010	.018	-.038	-.583	.561
BOARDM	.003	.001	.196	3.508	.001	-.001	.000	-.168	-3.333	.001	.018	.007	.169	2.734	.007
FINEXP	.008	.014	.032	.584	.560	.000	.004	.000	-.008	.994	.081	.112	.045	.729	.467
BDSIZE	.001	.001	.079	1.387	.167	.000	.000	-.048	-.929	.354	-.002	.008	-.021	-.307	.759
DSHARE	.065	.019	.186	3.384	.001	-.010	.005	-.098	-1.928	.055	.338	.155	.134	2.191	.030
COSIZE	.001	.000	.176	2.802	.006	.001	.000	.657	12.956	.000	.002	.001	.109	1.695	.092
GEAR	.005	.001	.474	8.651	.000	.000	.000	-.107	-2.098	.037	-.019	.004	-.310	-5.047	.000
PROF	.046	.014	.185	3.165	.002	-.006	.003	-.098	-1.811	.072	-.462	.105	-.288	-4.409	.000
LQDT	.010	.003	.204	3.563	.000	.002	.001	.130	2.384	.018	.057	.014	.261	3.964	.000
MULTIN	-.003	.005	-.041	-.746	.456	.000	.001	.007	.135	.893	.047	.036	.080	1.303	.194
MLIST	-.003	.005	-.030	-.550	.583	-.001	.001	-.056	-1.130	.260	-.066	.039	-.103	-1.680	.095
R sq.			.460					.531					.310		
R sq. adj.			.423					.502					.267		
St Error of the estimate			.0271					.00692					.21508		
F Change			12.499					18.109					7.188		
Sig F change			.000					.000					.000		

8.5.1 KPISCORE Regression Results

The multiple regression results as per Table 19 demonstrate that the overall model explains 42.3% of the variation in the level of KPI disclosures. Based on the table, it is evident that the significant[48] explanatory variables include PNED, BOARDM, DSHARE, COSIZE, GEAR, PROF and LQDT. The proportion of non-executive directors was found to significantly and negatively influence the level of KPI disclosures in the annual reports. This finding is an unusual one as it goes against the hypothesis (H^{1b}) that non-executive directors are more likely to encourage the increased disclosure of information on the business' critical success factors as proposed. H^{1b} is therefore rejected; it is possible that the negative relationship could be a result of non-executive directors' lack of involvement in the day to day running of the business as opposed to the executive directors. There are several other studies that have found a similar relationship (Haniffa and Cooke, 2002, Eng and Mak, 2003, Barako et al., 2006a). This finding may warrant further research in order to clarify whether non-executive board member appointments are also made on the basis of personal relationships with management in the case of public listed firms. This situation however leads to a compromise in their relationship which in turn leads to poor monitoring in the mitigation of agency costs.

The frequency of board meetings was found to significantly and positively influence the level of KPI disclosures in the annual reports under investigation. This finding is in line with the proposed hypothesis (H^{3b}). It is a reasonable line of thought to suggest that boards that meet more frequently are more likely to iron out issues that directly affect the performance of corporate entities. In this manner it is

[48] Significance referred to here is at the 95% confidence level.

also likely that such board set ups are likely to report increased information relating to KPIs. The next variable found to positively and significantly affect the level of KPI disclosures was director share ownership. This finding is in line with the hypothesis (H^{6b}). This positive relationship might be the result of alignment of directors' interests with those of the shareholders. When there is an alignment of interests due to a common denominator of stake in the company, it can be expected that directors are likely to report more KPI information. This increased disclosure reduces information asymmetry. This situation will also result in the increased awareness of company affairs by the ordinary shareholders such that they feel that their investment is more secure.

Naturally, larger companies are thought to have more resources for information gathering and disclosure compared to smaller companies. The results confirm that there is a significant and positive association between company size (measured by total assets) and the level of KPI disclosures (Ismail and Ibrahim, 2008, Alsaeed, 2006, Al-Khadash and Abhath Al-Yarmouk, 2003). H^{7b} is therefore to be accepted. It may be further suggested that larger companies on average tend to be more stable than smaller companies; as a consequence larger companies perform better and are more likely to disclose more KPIs to create appeal for their stocks. The level of gearing was also found to be significantly and positively associated with the level of KPI disclosures in the annual reports under investigation. This finding is in line with the hypothesis (H^{8b}) which is accepted. Companies that are highly geared are likely to create uncertainty among shareholders, customers, suppliers and lenders among many. In order to reduce the uncertainty, it may be worthwhile for companies to disclose increased information about their leverage position. In many cases it has been found that companies that are highly geared may be in that situation

because they anticipate a positive turn in business cycles hence borrow funds to invest in potentially successful ventures. Such companies therefore find it vital to present increased information which may include KPI information to its stakeholders. KPI information according to the ASB's Reporting Standard 1 should include forward looking information.

Profitability was found to positively and significantly influence the level of KPI disclosures (Hossain, 2008, Iatridis, 2008b, Wang and Claiborne, 2008). This finding is in line with the proposed hypothesis (H^{9b}). Highly profitable firms have an incentive to disclose this information to create demand for the company's stocks which will in turn potentially influence positive shifts in the stock prices of the firm in accordance with the signalling theory. The final variable that was found to have a significant influence on the level of KPI disclosures was liquidity. It may be suggested that firms with higher levels of liquidity tend to fare better in the market as they can better and readily pay any financial dues. Firms with higher liquidity are also likely to perform better as they can readily take advantage of lucrative investment opportunities. As a consequence they are more likely to report more KPIs in the annual report highlighting their critical success factors. Hypothesis H^{10b} is therefore accepted. The number of financial experts on the board, audit committee size, board size, multinationality and multiple stock exchange listings all demonstrated a relationship with the level of KPI disclosures but these relationships were insignificant.

8.5.2 Word Count Regression Results

The multiple regression equation computed for word count demonstrates that 50.2% of the variation in the quantity of words used to describe the KPIs disclosed

can be explained by the model. Company size and liquidity were found to be positively and significantly associated with the amount of words used to describe KPIs in relation to the total word count in the relevant annual report. This finding is in line with hypotheses H^{7b} and H^{10b} which are accepted. Frequency of board meetings, director share ownership, gearing and profitability were found to be significantly and negatively associated with word count. In the case of company size (H^{7b}), the argument expressed earlier holds as it can be expected that larger companies tend to have better resources to provide more detailed information regarding KPIs in their annual reports (Al-Khadash and Abhath Al-Yarmouk, 2003, Hossain and Hammami, 2009). Along the similar line of thought, it falls that the same argument is relevant to businesses with higher levels of disposable income. It can also be reasonably expected that such companies will provide more detailed information in the annual reports due to the ready availability of financial resources to collect and disclose detailed information regarding KPIs as mentioned in H^{10b}.

Board meeting frequency was found to be significantly negatively associated with levels of word count in the annual report. This finding was contrary to the proposed hypothesis (H^{3b}), particularly on the premise that the same variable was found to significantly affect KPISCORE positively. Word count was investigated to measure the amount of words in the KPI disclosure descriptions as a percentage of the total number of words in the annual report. It is possible that companies that have too many meetings do so because they fail to reach agreements on certain aspects regarding the critical success factors of the business therefore reduced word count score. It may also be suggested that in some cases too many meetings may lead to disfunctionality.

Based on the results, public companies with higher gearing scored lower on word count score in their annual report. This significant negative association was also found with profitability. The hypotheses H^{8b} and H^{9b} formulated are therefore to be rejected. It is not clear why these relationships exist in this direction. Some may argue that with high gearing or high profitability, companies have to carefully select their wording in the annual reports such that it does not convey the wrong signals to stakeholders therefore such companies tend to be more cautious when it comes to detail. Profitability was found to be negatively associated to word count at the 0.01 level of significance.

Director shareholding was the final significantly associated variable to word count. The association was found to be negative contrary to the hypothesis H^{6b}. Since the data for this study was based on 2008 annual reports which was the same era marking the climax of the global financial crisis, it can be suggested that there is a strong possibility that companies with high director share ownership may have had a tendency of disclosing limited poor performance information during this difficult business cycle which would result in protection of company share prices. The results could well be different under an unalike economic climate. PNED, FINEXP, BDSIZE, MULTIN and MLIST did not have significant relationships with the level of word count disclosed.

8.5.3 Comprehensiveness Regression Results

The multiple regression results according to Table 19 demonstrate that the overall model explains 26.7% of the variation in the level of KPI comprehensiveness. Comprehensiveness is a measure that was designed to measure the quality of KPI disclosures as explained earlier. The variables that were found to significantly

influence comprehensiveness of KPI disclosures according to the model include PNED, BOARDM, DSHARE, COSIZE, GEAR, PROF, LQDT and MLIST. As expected under comprehensiveness, the findings will provide more insight as it is measured under four[49] dimensions as opposed to the word count methodology in the previous section. One of the disadvantages of the word count methodology is that although it provides some insights, it is a generalised measure hence the comprehensiveness measure would provide even better insight as it considers specific KPI attributes. Word count only measures quantity within descriptions while comprehensiveness measures the quality within descriptions.

Several previous studies have found a positive and significant relationship between the proportion of non-executive directors and the quality of disclosures (Babío Arcay and Muiño Vázquez, 2005, Wan-Hussin, 2009, Cheng and Courtenay, 2006, Eng and Mak, 2003). The results of this study display that the proportion of non-executive directors is positively and significantly associated with the comprehensiveness of KPIs disclosed. This finding is in line with the suggested hypothesis (H^{1b}). It can be suggested that non-executive directors are overseers therefore they will look to ensure that reporting guidelines are followed. Non-executive directors play the role of a monitoring tool to mitigate the agency problem.

Board meeting frequency was also found to be positively and significantly associated with the level of comprehensiveness. Hypothesis H^{3b} is therefore accepted. As suggested earlier, frequent board meetings may be seen as opportunities to iron out performance issues. If such issues are ironed out, it is in the interest of the board to report these resolutions to stakeholders; one important

[49] Presence of KPIs, relevant amounts, reason for changes and forward looking elements.

manner in which this information is communicated is through reporting comprehensive KPI information. This action will actively reduce information asymmetry. Directors who own shares within the firm are likely to have ambitions that are aligned with those of ordinary shareholders with the primary goal of maximising profits. Maximisation of profits is very often communicated through comprehensive KPIs and this would explain the positive significant relationship demonstrated through the results. This finding is in line with hypothesis H^{6b} which is accepted.

Company size was found to significantly[50] explain comprehensiveness of KPI disclosures in line with the hypothesis (H^{7b}). Larger companies disclose more comprehensive information due to the availability of the resources required as this may be a costly exercise (Ismail and Ibrahim, 2008, Owusu-Ansah, 1998a, Barako et al., 2006a, Wan-Hussin, 2009). Higher liquidity was found to be significantly positively associated with changes in the level of comprehensive disclosures. This finding is in line with the hypothesis H^{10b} formulated therefore accepted. Firms that possess higher liquidity cannot only readily afford to pay the costs of gathering and disclosing comprehensive performance information but may also wish to report their strong cash equivalence positions. A result that was contrary to expectation was the significant[51] negative relationship between multiple stock exchange listing and comprehensiveness. Although it makes sense to expect a higher level of disclosures due to multiple stock exchange requirements, the case for comprehensiveness might be different. Where firms are listed on multiple exchanges there is strong possibility that the comprehensiveness of the information disclosed will be compromised due to

[50] At the 90% confidence level

[51] At the 90% confidence level

the vast amounts of information that companies are required to disclose in different jurisdictions. It is not uncommon for companies to engage in box ticking exercises to meet the minimum requirements for a particular stock exchange. Hypothesis H^{13} is therefore rejected.

Gearing reported a negative significant association with the comprehensiveness of information disclosed. This result was contrary to the hypothesis H^{8b} developed. The possible explanation is that firms that are highly geared may disclose larger amounts of information in order to justify the level of gearing. This information may however not be comprehensive. The final variable found to be associated with comprehensiveness was profitability which surprisingly has a significant negative relationship under the sample for listed companies. An observation by the researcher that might have led to this finding is that highly profitable businesses tend to report vast amounts of information on their financial KPIs and pay very little attention to the non-financial KPIs. The result of this situation is that the comprehensiveness of the overall KPIs is compromised due to an imbalanced distribution of efforts in the amount of informational attributes provided. Hypothesis H^{9b} was therefore rejected.

8.6 Discussion of the Results

This chapter investigated public listed companies. The chapter investigated the extent of KPI disclosures in light of the regulation to report on KPIs under the Companies Act 2006. Corporate governance mechanisms (proportion of non-executive directors, audit committee size, frequency of board meetings, number of financial experts on the board, board size and director share ownership) and company specific characteristics (gearing, profitability, company size, liquidity,

multinationality and multiple listing status) where investigated in order to determine their influence on disclosures under three measures[52]. The three measures include key performance indicator score[53], word count[54] and comprehensiveness[55].

[52] Dependent variables

[53] This is a measure for the extent of KPI disclosures in the annual report as a fraction of a constructed index.

[54] This is a measure of the total number of words used to describe KPIs in the annual report as a proportion of the total word count of the full report.

[55] This is a measure of KPI disclosure quality. Comprehensiveness takes into account, presence of KPI disclosures, stating of the relevant figures, reasons provided for the changes in variation of KPIs of several trading periods and forward looking attributes/future targets.

Table 20: Significance of Variables Across the Three Methods

Variable	KPISCORE	WCOUNT	COMP
PNED	Yes**	No	Yes**
AUDSIZE	No	No	No
BOARDM	Yes***	Yes***	Yes***
FINEXP	No	No	No
BDSIZE	No	No	No
DSHARE	Yes***	Yes*	Yes**
COSIZE	Yes***	Yes***	Yes*
GEAR	Yes***	Yes**	Yes***
PROF	Yes***	Yes*	Yes***
LQDT	Yes***	Yes**	Yes***
MULTIN	No	No	No
MLIST	No	No	Yes*

***. Significant at the 0.01 level

**. Significant at the 0.05 level

*. Significant at the 0.01 level

Table 20 provides a summary of the significance of variables over the three dimensions of disclosure investigated. From the table it can be seen that audit committee size, financial experts on the board, board size and multinationality do not have a significant association with all three measures of disclosures investigated. On the other hand other findings such as company size results have been found to be significantly associated with all the three measures of disclosures. The company size results are consistent with those reported by Firth (1979), Gray and Roberts (1989), Tauringana and Mangena (2009), Cornier et al (2011) and Branco et al (2011) among many. Company size has been posited as the most important significant explanatory variable of the extent of annual report disclosures.

Other variables such as frequency of board meetings, director share ownership, gearing, profitability and liquidity have been found to be significantly associated with disclosure levels in all three dimensions. These findings are consistent with other previous disclosure studies such as Cornier et al (2011) for leverage/gearing. The proportion of non-executive directors is a significant explanatory variable under all three measures except for word count. Other variables have been found to be significantly associated at the 0.01 significance level as indicated by the asterisks. Overall, the most significantly influential variables for KPI disclosures are BOARDM, DSHARE, COSIZE, GEAR, PROF and LQDT.

8.7 Summary and Conclusion

The aim of this chapter was to analyse KPI disclosures among large public listed companies in the UK. Some of the objectives included firstly to analyse the extent of KPI disclosures in light of Companies Act 2006 regulations. Secondly, to investigate whether corporate governance mechanisms significantly influence the disclosure of KPI disclosures and third, to investigate whether company specific characteristics significantly influence the disclosure of KPIs. From the results it was noted that approximately 90% of the sample disclosed at least one KPI in their annual report. This statistic represents the highest figure for KPI disclosures compared to evidence from previous research. This statistic alone serves as an indicator to policy formulators that regulations have had a positive impact in attaining its objectives. From the extent of disclosure it was also noted that public listed companies report an increased average number of KPIs compared to previous research. This suggests that corporate entities are making an effort towards the level of reporting.

On average as per Table 20; it has been noted that board meeting frequency, director share ownership, company size, gearing, profitability and liquidity all have a significant influence on the level of KPI disclosures on the three dimensions investigated. Audit committee size, financial experts on the board, board size and multinationality have all been found to be insignificantly associated to the level of KPI disclosures on all three platforms. It was interesting however to note that certain variables for example proportion of non-executive directors did not have an influence on the word count of disclosures but had a significant influence on comprehensiveness of KPI disclosures which measures quality. This finding clarifies the importance of interaction of certain variables to yield different results and also the fact that although companies may all report on KPIs, the focus of their reporting can vary widely from company to company.

Chapter 9

Hypotheses Testing, Results and Discussion: Pooled Companies

9 Hypotheses Testing, Results and Discussion: Pooled Companies

9.1 Introduction

This chapter sets out to investigate the extent of disclosure among the pooled set of companies. The companies investigated consist of both private limited and public listed companies. The selection of companies was conducted over two steps. The first being summation of all the companies from the private limited firms investigated and public listed firms combined. From this set of companies, the extent of disclosure was investigated and the results are discussed in the section below. The second stage of the data selection for the regression analysis involved a summation of only those companies that made KPI disclosures as explained in Chapter 6[56].

As already mentioned, the first objective was to investigate the extent of disclosure among all the companies investigated under the sample, large private and public listed firms operating in the UK. The second objective was to investigate whether company characteristics and corporate governance mechanisms influence the disclosure of KPIs in the annual reports of the combined sample of companies. The level of KPI disclosures was measured by KPISCORE[57], WCOUNT[58] and COMP[59]. The rest of the chapter is organised as follows: The results start off with a

[56] Data and Methodology

[57] The total number of KPIs disclosed in the annual report as a percentage of a selected disclosure index.

[58] The total number of words used to describe KPIs as a percentage of the total number of words in the annual report.

[59] The disclosure comnprehensiveness of reported KPIs. The comprehensiveness was measured by assessing firstly whether KPIs have been disclosed or not; secondly' whether corresponding figures have been attached to any reported KPIs, third; the reasons for changes in the figures reported have

discussion of the descriptive statistics for the pooled set of companies in section 9.2. The next section of the chapter covers results from the correlation analysis followed by the diagnostic procedures conducted in sections 9.3 and 9.4 respectively. The multiple regression results are illustrated and explained in section 9.5 covering extent of KPIs disclosure, word count and comprehensiveness results. Section 9.6 contains discussions of the results and the chapter closes with section 9.7 by summarising and providing some concluding remarks.

9.2 Descriptive Statistics

The Table 21 provides an aggregate of the level of disclosure through combining the findings from both the private and public firms. It is a summary of how many firms on aggregate disclose KPIs in comparison to the ones that do not disclose KPIs and serves as a pointer as to how well umbrella regulation requiring companies to disclose KPIs in their annual reports is meeting its objectives.

Table 21: Disclosure Extent Results

	KPI Reporting Firms	**Non-Reporting Firms**	***Sub-total***
Public Listed Companies	184	21	205
Private Limited Companies	104	101	205
Total	**288**	**122**	**410**

From the results it can be seen that 70.24% of all companies in the sample disclose at least a single KPI in their annual report. Although this statistic represents progress towards the level of disclosures, there is a considerable difference between

been provided and finally, whether an forward looking disclosures regarding the reported KPIs have been provided or not.

private firms and public firms given that the regulation governs both sets of companies. The individual statistics and comparisons for private and public listed entities are discussed in Chapters 7 and 8 respectively.

The following Table 22 summarises the descriptive statistics of the variables including all dependent and independent variables.

Table 22: Descriptive Statistics

		KPISCORE	WCOUNT	COMP	PNED	AUDSIZE	BOARDM	FINEXP	BDSIZE	DSHARE	COSIZE	GEAR	PROF	LQDT	MULTIN	LSTAT	MLIST
N	Valid	410	410	410	410	410	410	410	410	410	410	410	410	410	410	410	410
Mean		.0567	.0140	.6318	.5085	3.6083	8.0542	.4091	8.5417	.1141	260.5661	2.4355	.0634	1.1037	.6583	.5042	.4250
Std. Error of Mean		.00214	.00086	.01556	.01423	.08300	.15647	.01175	.21116	.01475	182.19667	.36747	.01127	.08311	.03068	.03234	.03198
Median		.0526	.0121	.6450	.5714	4.0000	8.0000	.4000	8.0000	.0034	.8432	.9364	.0405	.8900	1.0000	1.0000	.0000
Mode		.00	.00	.00[a]	.50	3.00	8.00	.33[a]	9.00	.00	.00[a]	.83	.00	.71[a]	1.00	1.00	.00
Std. Deviation		.03315	.01332	.24104	.22049	1.28588	2.42399	.18195	3.27127	.22855	2822.579	5.69287	.17461	1.28755	.47526	.50103	.49538
Variance		.001	.000	.058	.049	1.653	5.876	.033	10.701	.052	7966950.8	32.409	.030	1.658	.226	.251	.245
Skewness		.930	3.744	-.832	-.569	.097	-.378	.677	1.279	2.333	14.683	6.287	-.512	7.400	-.672	-.017	.305
Std. Error of Skewness		.157	.157	.157	.157	.157	.157	.157	.157	.157	.157	.157	.157	.157	.157	.157	.157
Kurtosis		1.451	22.368	.578	-.262	3.620	1.798	1.388	8.697	4.923	221.591	47.510	5.944	67.283	-1.562	-2.017	-1.923
Std. Error of Kurtosis		.313	.313	.313	.313	.313	.313	.313	.313	.313	.313	.313	.313	.313	.313	.313	.313
Range		.18	.12	1.00	1.00	10.00	17.00	1.00	30.00	1.00	42944.00	52.10	1.65	13.79	1.00	1.00	1.00
Minimum		.00	.00	.00	.00	.00	.00	.00	1.00	.00	.00	-.42	-.87	.02	.00	.00	.00
Maximum		.18	.12	1.00	1.00	10.00	17.00	1.00	31.00	1.00	42944.00	51.68	.77	13.81	1.00	1.00	1.00
Percentiles	25	.0329	.0060	.5200	.3727	3.0000	7.0000	.3000	7.0000	.0003	.2616	.3695	.0054	.6025	.0000	.0000	.0000
	50	.0526	.0121	.6450	.5714	4.0000	8.0000	.4000	8.0000	.0034	.8432	.9364	.0405	.8900	1.0000	1.0000	.0000
	75	.0725	.0182	.8000	.6667	4.0000	9.7500	.5000	10.0000	.0749	4.0060	2.0806	.1366	1.2475	1.0000	1.0000	1.0000

a. Multiple modes exist. The smallest value is shown.

Based on the Table 22, the pooled set of companies devotes approximately 1.4% of the annual report to explaining KPI disclosures. The comprehensiveness of the disclosed KPIs scored an average of 63% on the disclosure scale that considers presence of KPIs in the annual report, amount and comparison, forward looking information and the reason for changes in the KPI performance over previous trading periods. The pooled set of companies reported that approximately 51% of individuals on corporate boards are non-executive directors. According to the results, the average level of director share ownership for the pooled set of companies is approximately 11%. The average board size for the largest companies operating in the UK is 9 members with approximately 41% of board members possessing some financial expertise such as qualified auditors, investment bankers or chartered accountants among other professions. The results also show that on average; approximately 66% of the largest companies operating in the UK also have substantial operations outside of the GB territory.

9.3 Correlation Analysis[60]

From the Table 23 of the Correlation Results, it can be seen that the highest correlation is between MLIST and LSTAT. The correlation coefficient is .853, the positive relationship between these two variables was noticed during the scoring process as often large firms that were listed also had operations outside Great Britain (GB) and were registered on other stock exchanges. The level of correlation would however be expected to be different for smaller listed companies as it is reasonable

[60] In order to run correlation analysis and OLS regressions, only KPI disclosing firms were considered. The 104 KPI disclosing private limited companies were matched with a randomly selected sample of 104 KPI disclosing public listed companies. The pooled sample thus constituted 208 companies including both private and public listed companies.

to suggest that smaller companies would have smaller operations outside of GB in comparison with larger companies. Though .853 is the highest correlation, it is certainly not a cause for concern as it is below the 0.9 threshold suggested by Field (2009). There is consequently no concern for multicollinearity within the models to be tested for the pooled set of companies.

Table 23: Correlation Results

	KPISCORE	COMP	WCOUNT	PNED	AUDSIZE	BOARDM	FINEXP	BDSIZE	DSHARE	COSIZE	GEAR	PROF	LQDT	MULTIN	LSTAT	MLIST
KPISCORE	1															
COMP	.137	1														
WCOUNT	.068	.013	1													
PNED	.026	.062	.103	1												
AUDSIZE	-.084	.143*	.021	.321**	1											
BOARDM	.051	.005	-.107	.113	.318**	1										
FINEXP	.045	-.060	-.003	.069	-.144*	-.084	1									
BDSIZE	.074	.138*	-.158*	.365**	.659**	.264**	-.100	1								
DSHARE	-.159*	-.022	-.021	-.195**	-.270**	-.212**	.080	-.296**	1							
COSIZE	.167*	.149*	.614**	.061	.038	-.048	.018	.071	-.013	1						
GEAR	-.094	-.063	-.182**	-.032	-.076	.041	-.040	.006	-.046	-.081	1					
PROF	.121	.195**	.141*	.263**	.153*	.021	-.004	.202**	-.097	.103	-.004	1				
LQDT	-.037	.034	.012	-.042	.072	-.044	.035	.057	.023	-.011	.059	.194**	1			
MULTIN	.066	.136	-.040	.102	.040	.020	-.042	.055	-.124	.044	.093	.104	-.009	1		
LSTAT	.205**	.274**	-.241**	.478**	.300**	.146*	.024	.396**	-.370**	.134*	.070	.316**	-.003	.252**	1	
MLIST	.150*	.308**	-.311**	.429**	.289**	.138*	.030	.350**	-.330**	.080	.058	.284**	.017	.246**	.853**	1

*. Correlation is significant at the 0.05 level (2-tailed).
**. Correlation is significant at the 0.01 level (2-tailed).

9.4 Diagnostic Procedures

In order to ensure that the data and tests used in this chapter do not violate statistical assumptions, some diagnostic checks were conducted. The main checks conducted include standard residuals, Cook's distance, Durbin-Watson and normality distribution. Commencing with the standard residuals; Field (2009) suggests that they assume normal distribution and offers some guidance on how to interpret the standard residual values. When a sample contains more than 1% of the constituents of that sample possessing standardized residuals of +2.5 and or more than 5% with standardized residuals of +2, then there is cause for concern because the sample may possibly not best represent actual data (Field, 2009). For the lower limit of greater than 2.0 KPISCORE, WCOUNT and COMP reported results of 2, 1 and 2 cases greater respectively. For cases above the upper limit of greater than 2.5; the result for KPISCORE, WCOUNT and COMP reported 4, 1 and 2 cases respectively.

Based on these results, it can be concluded that the assumption guidelines have not been violated, the highest statistic is that of KPISCORE number of cases greater than 2.5, the statistics as a proportion would represent 0.00975 which is below the 1% threshold so would not be a cause for concern in this situation. The remainder of the statistics were below the 1% and 5% relevant thresholds hence the guidance was not violated.

The next diagnostic check that was conducted is the Cook's distance. Cook's assists in detecting influential individual or subsets of observation in linear regression for cross sectional data such as that used in this study (Zhu et al., 2012, Cook, 1977). A Cook's value of greater than 1 is thought to be a cause for concern (Cook and Weisberg, 1982). The minimum values reported for Cook's distances for

KPISCORE, WCOUNT and COMP were .000 for all three categories and the maximum values were .157, .573 and .875 respectively.

The Durbin-Watson test was also conducted, as a rule of thumb for this test, values <1 and >3 are a cause for concern (Dardor, 2009). The findings on KPISCORE, WCOUNT and COMP are 1.951, 1.791 and 1.838 respectively. All these statistics do not violate the statistical assumption of the diagnosis check. Also attached in the appendices are the histograms to illustrate normality, plot of standardized regression residual and scatterplots to illustrate checks for heteroscedasticity. From the supporting illustrations in Appendix 6, it can be seen that the overall check assumptions have not been violated. The average VIF results showed that the relevant scores for KPI, WCOUNT and COMP were 1.68, 1.873 and 1.68 respectively. None of the scores were substantially greater than 1 therefore there were no strong linear relationships among the predictors.

9.5 OLS Regression Results

Table 25 summarises the regression results of the three models investigated in this chapter. The three independent variables investigated include KPISCORE, WCOUNT and COMP. The companies investigated in this chapter are a gross of those companies that disclosed KPIs only including both large private and large public listed companies. The following multiple regression models were used:

$$KPISCORE = \beta_0 + \beta_1\ PNED + \beta_2\ AUDSIZE + \beta_3\ BOARDM + \beta_4\ FINEXP + \beta_5\ BDSIZE + \beta_6\ DSHARE + \beta_7\ COSIZE + \beta_8\ GEAR + \beta_9\ PROF + \beta_{10}\ LQDT + \beta_{11}\ MULTIN + \beta_{12}\ LSTAT + \beta_{13}\ MLIST + \varepsilon_j$$

$$WCOUNT = \beta_0 + \beta_1\ PNED + \beta_2\ AUDSIZE + \beta_3\ BOARDM + \beta_4\ FINEXP + \beta_5\ BDSIZE + \beta_6\ DSHARE + \beta_7\ COSIZE + \beta_8\ GEAR + \beta_9\ PROF + \beta_{10}\ LQDT + \beta_{11}\ MULTIN + \beta_{12}\ LSTAT + \beta_{13}\ MLIST + \varepsilon_j$$

$$COMP = \beta_0 + \beta_1\ PNED + \beta_2\ AUDSIZE + \beta_3\ BOARDM + \beta_4\ FINEXP + \beta_5\ BDSIZE + \beta_6\ DSHARE + \beta_7\ COSIZE + \beta_8\ GEAR + \beta_9\ PROF + \beta_{10}\ LQDT + \beta_{11}\ MULTIN + \beta_{12}\ LSTAT + \beta_{13}\ MLIST + \varepsilon_j$$

Table 24 identifies the variables included in the equation:

Table 24: Explanation of Variables

Variable	*Explanation*
β_0.....β_{11}	Regressors/regression coefficients
KPI	KPI disclosure; [1] where at least a single KPI is disclosed and [0] where no KPI disclosures have been made
KPISCORE	Level of KPI disclosures in annual reports as a proportion of a selected disclosure index
WCOUNT	Percentage of words used to describe KPIs as a proportion of the total number of words in the annual report
COMP	Measure of disclosure quality taking into account (i) presence of KPIs, (ii) amounts, (iii) reason for changes/trends and (iv) forward looking disclosures
PNED	Proportion on non-executive directors on the board
AUDSIZE	Audit committee size
BDMEET	Frequency of board meetings held during the year
FINEXP	Proportion of financial experts on the board of directors
BDSIZE	Total number of individuals on the board of directors
DSHARE	Director share ownership
COSIZE	Company size measured by total assets
GEAR	Gearing
PROF	Profitability
LQDT	Liquidity
MULTIN	Multinationality (code [1] awarded if company has substantial operations outside GB, code [0] if not)
LSTAT	Listing status (code [1] awarded if a company is listed on at least one stock exchange and [0] if the company is not listed on any stock exchange.)
MLIST	Multiple listing status (code [1] if a company is listed on more than one stock exchange and [0] if listed on just one or none.)

Table 25: Regression Results

	KPISCORE					WCOUNT					COMP				
	Unstandardized Coefficients		***Standardized Coefficients***	***t***	***Sig.***	***Unstandardized Coefficients***		***Standardized Coefficients***			***Unstandardized Coefficients***		***Standardized Coefficients***		
	B	*Std. Error*	*Beta*			*B*	*Std. Error*	*Beta*	*T*	*Sig.*	*B*	*Std. Error*	*Beta*	*t*	*Sig.*
(Constant)	.051	.009		5.876	.000	.016	.003		5.482	.000	.585	.061		9.573	.000
PNED	-.024	.009	-.184	-2.718	.007	.011	.003	.221	4.021	.000	-.238	.061	-.272	-3.907	.000
AUDSIZE	-.006	.002	-.293	-3.908	.000	.001	.001	.164	2.481	.014	-.001	.012	-.009	-.116	.908
BOARDM	.001	.001	.091	1.545	.124	.000	.000	-.051	-1.015	.311	-.003	.005	-.037	-.601	.548
FINEXP	.019	.008	.125	2.255	.025	.000	.003	-.001	-.019	.985	-.128	.061	-.122	-2.084	.038
BDSIZE	.002	.001	.268	3.491	.001	-.001	.000	-.308	-4.668	.000	.014	.004	.262	3.298	.001
DSHARE	-.016	.008	-.125	-2.090	.038	-.006	.003	-.123	-2.374	.019	.218	.056	.251	3.922	.000
COSIZE	.000	.000	.391	6.766	.000	.000	.000	.567	11.618	.000	.000	.000	.158	2.699	.008
GEAR	.000	.000	-.074	-1.341	.182	.000	.000	-.095	-2.000	.047	.005	.002	.123	2.116	.036
PROF	.028	.010	.180	2.891	.004	.009	.003	.144	2.768	.006	.216	.064	.215	3.360	.001
LQDT	-.002	.001	-.092	-1.660	.098	.000	.000	.012	.241	.810	.026	.010	.165	2.747	.007
MULTIN	.004	.003	.058	1.036	.301	.000	.001	.004	.078	.938	.013	.024	.033	.557	.578
LSTAT	.005	.006	.085	.792	.429	-.004	.002	-.182	-1.759	.080	-.015	.045	-.040	-.340	.734
MLIST	-.001	.006	-.019	-.193	.848	-.005	.002	-.241	-2.354	.020	.152	.042	.392	3.591	.000
R sq.			.439					.587					.372		
R sq. adj.			.401					.560					.330		
St Error of the estimate			.02243					.00748					.15779		
F Change			.439					21.240					8.853		
Sig F change			.000					.000					.000		

9.5.1 KPISCORE Regression Results

40.1% of the variation in KPISCORE can be explained by the model employed. From the regression results of KPI disclosures among the pooled set of companies, it was found that FINEXP, BDSIZE, COSIZE and PROF all had a positive and significant relationship with the KPISCORE which represents the level of KPI disclosures as a proportion of an index. On the other hand AUDSIZE, BOARDM, DSHARE and LQDT were found to have a significant but negative relationship with the level of KPI disclosures by the same set of companies. As expected, larger companies were found to have a positive relationship significant at the 0.01 level. This is in line with the proposed hypothesis H^{7c}. As larger companies are prominent, they tend to provide a greater deal of disclosures in a bid to self-govern and self-protect against further regulations. In the case of KPIs, it is reasonable to expect larger companies to adhere to relatively recent regulatory developments and showcase that they are making efforts to meet any summoning. As can be supported by the agency theory, this could in fact reduce monitoring cost with respect to the companies' boards. These findings are in line with other previous studies (Ismail and Ibrahim, 2008, Alsaeed, 2006, Al-Khadash and Abhath Al-Yarmouk, 2003).

PROF was also found to be significantly and positively associated with the level of KPISCORE at the 0.01 level. This finding is in line with the hypothesis (H^{9c}) that was proposed. The rationales are similar to the previous chapter in that companies that perform well will look to dance and shout about their superior performance, some authors label bad performing companies as lemons (Akerlof, 1970).

Companies with larger boards were found to disclose a higher proportion of KPIs compared to companies with a smaller board size. The relationship was found to be significant at the 0.01 level. This is in line with the proposed hypothesis H^{5c}. Companies with larger boards can be thought of as having a greater base for human resources thus talent. If this is the case, it can reasonably explain that such entities perform better on their critical success factors and would wish to disclose the relevant/corresponding data. If they were performing badly it would be interesting to see whether they would still disclose a higher amount of KPI information. It may be proposed that this may still be the case as such companies will probably look into the future through identifying problematic areas and providing more forward looking information to the identified KPIs, this thought is supported and evidenced under the results for comprehensiveness[61] below.

The proportion of financial experts on the board was found to be positively and significantly associated with the level of KPI disclosures at the 0.05 level. This finding is in line with the proposed hypothesis H^{4c}. Financial experts are likely to be more diligent with the financial key performance indicators (FKPIs) compared to companies with a smaller proportion of experts. For this reason the rationale for the finding could be explained by the fact that where there are more financial experts on the board then it follows that there would be a higher level of KPIs relating to financial measures reported in the relevant annual reports.

PNED is significantly and negatively associated with the level of KPI disclosures in the annual reports of the pooled set of companies, the relationship is significant at the 0.01 level. This finding is contrary to the hypothesis (H^{1c})

[61] COMP

formulated therefore H^{1c} is to be rejected. Where there are a higher proportion of directors who are not involved in the day to day running of the business then it falls that the quantity of KPIs reported would also be limited. One of the characteristics of KPIs is that they are set out by the management who are involved in the day to day running of the enterprise; if there are a high proportion of non-executive directors then it makes sense to expect a lower level of KPIs reported under such settings. This finding might also be influenced by the result that a negative association exists within private limited companies and this might have an overall effect on the pooled company findings.

AUDSIZE was found to have a negative relationship with KPI disclosures at the 0.01 level contrary to the hypothesis H^{2c}. The audit committee is responsible for the primary task of "overseeing the firm's financial performance and ensure the reliability of its financial reporting" (Georges and Thouraya, 2005). Other studies also reinforce that the audit committee plays a monitoring role (Chapple et al., 2012, Ika et al., 2012). Larger committees may subject information to greater scrutiny therefore limiting the amount that is agreed on for final publishing. In other words, a larger audit committee is likely to entail that there is an increased level of supervision and in turn increased filtering of information that is reported.

DHSHARE was found to have a negative relationship with the level of KPI disclosures at the 0.05 level. H^{6c} is therefore rejected. There is a bigger agency problem when ownership by directors is low, in such situations it is common that managers will have incentives to consume perks and there is likely to be a reduced level of incentives in maximising performance in their tasks. It can therefore be expected that shareholders in this situation will wish to increase the level of monitoring so as to reduce the agency problem (Jensen and Meckling, 1976, Eng and

Mak, 2003). The level of monitoring can however be reduced if the directors in these situations provide increased disclosure therefore the negative relationship between DSHARE and KPISCORE. This finding is consistent with other studies in the field (Ruland et al., 1990, Li et al., 2012, Sidney and Bertrand, 2004).

Finally under this model, LQDT was found to have a negative relationship with KPISCORE, the relationship is however significant only at the 0.1 level. This finding was is consistent with other studies (Wallace et al., 1994a, Naser et al., 2002, Khaled et al., 2010), including some that have also found weak relationships (Elzahar and Hussainey, 2012). It may be suggested that companies that have low liquidity ratios may have a higher level of disclosures in the annual report as a means of justifying their weak financial position. Hypothesis H^{10c} is therefore rejected. The next section of the results analyses the model for the amount of words disclosed in the annual report.

9.5.2 Word Count Regression Results

56% of the variation in WCOUNT can be explained by the regression model employed. Word count is a measure for the quantity of disclosures, the amount of words method disregards the amount of KPIs disclosed hence only takes into account the amount of words used to describe KPIs as a proportion of the total number of words in the annual report. The results from the WCOUNT model reveal that PNED, AUDSIZE, COSIZE and PROF were found to be positively and significantly associated with the proportion of words used to discuss KPIs. BDSIZE, DSHARE, GEAR, LSTAT and MLIST were found to be negatively associated with WCOUNT.

COSIZE was found to significantly and positively explain the level of WCOUNT in annual reports in relation to the total number of words in the full

report, the relationship was found to be significant at the 0.01 level (Hossain and Hammami, 2009, Barako et al., 2006a, Owusu-Ansah, 1998b). This finding is in line with the hypothesis H^{7c} formulated. According to the results, larger companies use more words in discussing their KPIs than smaller companies. This result is consistent with that found for KPISCORE in the previous section which leads to the thought that a higher number of KPIs may result in more words being used in the descriptions of those KPIs. The rationale would be similar to that proposed for KPISCORE. It was also found that PROF is positively and significantly associated with the proportion of words used to describe KPIs in the annual report. From this finding it appears that large companies tend to disclose more performance information when they perform well and less when the performance is not desirable. This relationship is significant at the 0.01 level. The finding is in line with the proposed hypothesis H^{9c} which is to be accepted.

PNED significantly and positively explains WCOUNT at the 0.01 level (Babío Arcay and Muiño Vázquez, 2005, Cheng and Courtenay, 2006, Wan-Hussin, 2009). This is a very unusual finding because the results also suggest that there is an inverse relationship with the number of KPIs. It may be suggested that where there is a higher number of non-executive directors, then they seek to provide explanations for those items that have been identified to the stakeholders, it however remains questionable as to the comprehensiveness of the disclosures. One then begs to wonder about the usefulness of these lengthy descriptions, this is a question that is addressed in the section of discussion of results below. The result is however in line with the proposed hypothesis H^{1c}.

AUDSIZE reports a positive significant relationship with the proportion of word count in the annual report in line with the formulated hypothesis H^{2c}. Auditors

clearly seem to be interested in the details, regardless of how many KPIs have been made. Where there is a larger number of individuals on the audit committee then a larger proportion of the annual report is devoted to the description of KPIs. A larger audit committee in this case appears to encourage the disclosure of details to stakeholders.

BDSIZE was found to be significantly and negatively related to the proportion of words used in describing KPIs reported in the annual reports of large companies. Hypothesis H^{5c} is contrary to the results therefore rejected. The rationale suggested in this case is that the board is at large interested in meeting the regulatory demands, the positive relationship with KPISCORE and negative relationship with WCOUNT suggests that it may be a box ticking exercise to ensure that regulatory demands are met but without necessarily devoting much effort to details in the KPI disclosures made. This situation however assists in the argument that the annual report has become too large, here the board effectively aim to provide the required KPIs but not necessarily excess detail.

DSHARE was found to have a negative relationship with the extent of WCOUNT in contrast to the hypothesis (H^{6c}) formulated. This finding is similar to that found for KPISCORE. According to the agency theory it seems that when director ownership is low there is a likelihood of the directors to consume perks and as a consequence there is increased monitoring. These monitoring costs can however be mitigated by increased disclosures which in turn also reduce information asymmetry between the management and shareholders. GEAR was found to be negatively associated with WCOUNT. The suggested explanation for this finding is that large companies may attempt to avoid providing details about poor performance in this financial ratio as it might be detrimental to the firms' affinity for investment

and confidence in stakeholders. On the other hand it may also make sense that firms with low gearing may wish to present an increased amount of detail regarding their identified KPIs in order to showcase their position of lower risk consequently attracting investment and reinstating confidence within their existing and potential stakeholders. As the formulated hypothesis (H^{8c}) is contrary to the finding, H^{8c} is rejected.

An atypical find in the results was that LSTAT and MLIST were found to be negatively associated with WCOUNT at the 0.1 and 0.05 levels respectively. This is contrary to the hypotheses H^{12c} and H^{13c} respectively which are both rejected. The general expectation is that when companies are listed on a stock exchange then they would make increased disclosures to meet the requirements of the various stock exchanges. In this case it however appears the opposite. The negative relationship witnessed is stronger for companies with multiple listings[62] compared to those with single listing status[63].

This may suggest that where there are stringent rules in the host country (UK) anyway, then any other stock exchange listing might not warrant the disclosure of additional information. Other authors have found that there are no significant relationships between listing status and information disclosure in different contexts (Cerf, 1961, Buzby, 1975). A final suggestion based on the results is that the comprehensiveness of disclosures made may be negatively affected by increased rules governing the disclosure items. Companies will attempt to tick boxes in all other areas of disclosures consequently spreading themselves thin. On the other hand unlisted companies that are not liable to extra disclosure rules would place more

[62] Significance = 0.05

[63] Significance = 0.1

emphasis on explaining/providing more detail on the already identified KPIs in their annual reports.

9.5.3 Comprehensiveness Regression Results

33% of the variation in WCOUNT can be explained by the model employed. This final section of the results chapter investigates corporate governance and company specific characteristics that influence the comprehensiveness of KPI disclosures made in the annual reports, comprehensiveness is represented by COMP[64]. PNED and FINEXP were found to have a negative relationship with COMP. BDSIZE, DSHARE, COSIZE, GEAR, PROF, LQDT and MLIST were found to positively and significantly influence the comprehensiveness of KPI disclosures made in the annual reports of firms operating in the UK.

DSHARE was found positively significant at the 0.01 level. This result is in line with the proposed hypothesis H^{6c}. Where directors within the company own a higher stake, it can be suggested that they may wish to increase the comprehensiveness of disclosures made in order to reduce any monitoring costs. It is reasonable to assume that a higher proportion of ownership by directors would lead to an alignment of interests with the shareholders of the firm. As a consequence the comprehensiveness of the information disclosed is likely to be increased as they wish to provide information that sheds the company in good light. Such information might attract investment; restore confidence among stakeholders and increase share price in the case of listed entities.

[64] Comprehensiveness (COMP) takes into account, whether a KPI has been disclosed at all, whether the relative figures have been disclosed, whether reasons have been provided to changes in the identified KPI and whether any forward looking information has been provided.

COSIZE was found to significantly explain disclosure comprehensiveness at the 0.01 level (Hossain and Hammami, 2009, Barako et al., 2006a, Ismail and Ibrahim, 2008). This finding confirms the hypothesis (H^{7c}) proposed. Larger companies as previously suggested have it in their own interest to self-regulate particularly in light of new regulations. Companies that are highly geared according to the findings of the COMP model tend to disclose more comprehensive information in accordance with hypothesis H^{8c} which is accepted. It is in the interest of highly geared companies to present comprehensive information in a bid to justify undesirable financial ratios.

In some cases it has been found that gearing may be a consequence of borrowing to take advantage of an investment opportunity. In the case of comprehensive disclosures, such companies may therefore provide the amounts concerned in the relevant ratios, reasons for the increase in gearing and forward looking information which in most cases would highlight flourishing financial performance for the future. It is therefore reasonable to expect highly geared business entities to provide more comprehensive information regarding their position. These results are consistent with several other studies (Bewley and Li, 2000, Brammer and Pavelin, 2004, Clarkson et al., 2008, Cormier and Magnan, 1999).

Along the same lines of thought, it was found that PROF significantly and positively explains disclosure comprehensiveness of reported KPIs (Hossain, 2008, Iatridis, 2008b, Wan-Hussin, 2009). This finding is in line with other previous findings (Cormier and Magnan, 1999, Cormier and Gordon, 2001) and is in line with the proposed hypothesis H^{9c}. The rationale for this finding is similar to that proposed in previous sections. Companies that display superior financial performance will in

most cases provide detailed information on this performance and in turn a range of benefits[65] may be derived from the disclosure of this information. The researcher posits a similar rationale for LQDT which was also found to have a positive relationship with the extent of COMP at the 0.01 significance level. Hypothesis H^{10c} is therefore to be accepted.

BDSIZE was found to be positively and significantly associated with COMP at the 0.01 level. This finding is supported by the proposed hypothesis H^{5c} which is accepted. Larger boards are thought to have the benefit of a wider pool of talent and therefore in this case it can be reasonably expected that the comprehensiveness of the information disclosed will be enriched. However it must be noted that in some cases, a larger number of members on the board may increase poorer communication and decision making (Hidalgo et al., 2011). It appears that this problem is offset by greater pool talents in UK large companies. MLIST is positively and significantly associated with the comprehensiveness of KPI disclosures at the 0.01 level. The previous section showed that the relationship is negative in relation to the amount of words used but in terms of comprehensiveness there is a positive relationship. This might highlight that multiple stock exchanges might have particular information items that they require disclosed and this is evidenced in the findings of the COMP model. Hypothesis H^{13} is therefore to be accepted.

The proportion of non-executive directors is associated negatively with COMP at the 0.01 level. This finding is contrary to the hypothesis (H^{1c}) formulated. The lack of detail might perhaps be a consequence of having a higher number of

[65] Benefits include for example easy accessibility to lending facilities, an improved stock price, confidence instilled in suppliers and existing lenders and attracting of potential investors among several reasons.

individuals who are not involved in the day to day running of the business. It is reasonable therefore to expect a positive relationship between executive directors and the comprehensiveness of KPI disclosures made in the annual report. H^{1c} is therefore rejected. The level of finance experts on the board was also found to be negatively associated with COMP. From the previous section it was discovered that FINEXP is positively associated with KPI. Although financial experts may disclose a larger amount of financial measures in the annual report, it appears that the details and comprehensiveness of disclosure seem to reduce with the number of experts on the board. Financial information can be extremely complex and meaningless in annual reports that are meant for ordinary individuals which might not have sufficient financial knowledge to decipher the information conferred. The negative relationship here is therefore a result of a higher proportion of financial experts that is not met by a resultant increase in the comprehensiveness of information disclosed. It may also be suggested that conflicts, communication inefficiency and slower decision making may prevail when there is a higher number of experts in a specific area leading to a lower comprehensiveness in the information items disclosed for every KPI identified. The hypothesis (H^{4c}) proposed is therefore rejected.

9.6 Discussion of Results

Extent of KPIs Disclosure

The results from the findings of this study show a positive response by companies to the regulation by the CA (2006) to disclose KPI as supported by some previous studies. Black Sun plc. (2006) reported that the percentage of companies disclosing KPIs rose from 19% in 2004 to 36% in 2005. This period was prior to the introduction of the business review and there is little reason to expect a high level of

KPI disclosures. This section of the study only covers large listed entities but the results suggest a big leap towards meeting regulatory recommendations. The study (Black Sun plc. 2006) also shows that the number of KPIs discussed ranged between one and eight while the current study shows an increase in the range too, of between one and twenty-three KPIs.

Deloitte (2005) examined the reporting of KPIs and found that 74% of the top 350 companies (by market capitalisation) disclosed clear KPIs. The average number of KPIs reported in that study was 3.6 KPIs per report whereas this study identifies that the average KPIs reported by listed firms is 8.2 KPIs. Once again this may be seen to demonstrate the efforts and progress being made by corporate entities in reporting critical success factors to a wide range of stakeholders. The range of KPIs disclosed based on results from the Deloitte (2005) study was between one and nine while as afore mentioned in this study lies between one and twenty-three. This finding supports the case that perhaps those companies that are disclosing KPIs are showing better practice over the years.

Deloitte (2006) also examined annual reports of 100, FTSE 350 companies spread evenly between the large, middle and small by market capitalisation. The findings suggested that the proportion of companies disclosing KPIs had decreased from 49% to 45%. They also report that the average number of KPIs disclosed was six. This finding shows a relatively lower disclosure extent compared to the 90% discovered in the current study where 205 largest listed companies were investigated. This increase in disclosure could be attributed to several reasons and among the main ones being the introduction of the requirements to report KPIs[66] and the notion that

[66] As exemplified in the study by Tauringana and Mangena (2009) explained below.

larger listed firms such as those investigated in this sample can better afford to gather the data compared to smaller companies. According to Deloitte (2005), the range of KPIs disclosed in the top 350 companies was 1 to 8 and a jump of 1 to 18 in their 2006.

Another study (Tauringana and Mangena, 2009) on KPIs reporting in the UK media sector showed that in 2004 and 2005 before the introduction of the Business Review (BR), only 56.3% of the companies disclosed some KPIs. Following the introduction of the mandatory Business Review in 2006, there was a noticeable increase in disclosure to 71.9% and 75% in 2006 and 2007 respectively. Although the study is industry specific it reveals that the media industry has a high level of KPIs disclosure.

Multiple Regression Results

Table 26 summarises the variables that significantly explain the disclosure of KPIs across the three models tested under pooled companies.

Table 26: Significance of Variables Across the Three Methods

Variable	KPISCORE	WCOUNT	COMP
PNED	Yes***	Yes***	Yes***
AUDSIZE	Yes***	Yes**	No
BOARDM	No	No	No
FINEXP	Yes**	No	Yes**
BDSIZE	Yes***	Yes***	Yes***
DSHARE	Yes**	Yes***	Yes***
COSIZE	Yes***	Yes***	Yes***
GEAR	No	Yes**	Yes**
PROF	Yes***	Yes***	Yes***
LQDT	Yes*	No	Yes***
MULTIN	No	No	No
LSTAT	No	Yes*	No
MLIST	No	Yes**	Yes***

***. Significant at the 0.01 level
**. Significant at the 0.05 level
*. Significant at the 0.1 level

This chapter investigated the pooled set of companies[67]. The results covered in the section above highlight the extent of disclosure and also the corporate governance and company specific variables that influence the extent of disclosures and the comprehensiveness of the disclosures made. The measures used to determine disclosure extent and comprehensiveness include KPISCORE[68], WCOUNT[69] and COMP[70]. Table 26 provides a summary of the variables that were found to significantly explain each of the three dependent variables investigated as part of this chapter.

[67] A combination of both private limited and public listed firms.

[68] This dependent variable measure the amount of KPI disclosed as a proportion of a specific index relevant to the company under scrutiny.

[69] This dependent variable represents the amount of words used to describe the KPIs disclosed in the annual report as a proportion of the total number of words in the full annual report. WCOUNT was used as a proxy for quantity disclosed.

[70] This dependent variable was used as a proxy for disclosure comprehensiveness. The score attributed to COMP aggregates the comprehensiveness attributes included in the KPIs disclosures namely presence of KPI, amount relevant to the KPI, reasons for changes in the KPI figures over different trading periods and forward looking information relating to the disclosed KPIs.

According to the summary table it can be seen that the number of board meetings and multinationality do not significantly explain KPISCORE, WCOUNT and COMP. The proportion of non-executive directors, the size of the board, company size and profitability all significantly explain KPISCORE, WCOUNT and COMP at the 1% level. These results are in line with previous studies as identified in the individual sections of results i.e. KPISCORE, WCOUNT and COMP. The results of this chapter confirm that there is a substantial difference between the quantity and the comprehensiveness of the information disclosed in the annual report. The factors that influence quantity and comprehensiveness are often different.

A classic example is that from the results it was found that the proportion of non-executive directors significantly explains KPISCORE, WCOUNT and COMP. PNED however has a negative relationship with KPISCORE and COMP but a positive relationship with WCOUNT. What this finding seems to suggest is that companies should perhaps be watchful of the proportion of independent directors it has on its board. The members may assist in the monitoring of the executive board members but possess limited knowledge of the company in comparison. As a consequence the results of this study suggest that a higher proportion of non-executive directors leads to the identification a fewer KPIs and lower comprehensiveness in the details of the disclosed KPIs. The opposite is also true, fewer non-executive where a higher level of executive directors lead to more resolute identification of the critical success factors of the business and better comprehensiveness of the KPIs identified and disclosed. What is also interesting in this find is that where there are a high proportion of non-executive directors, they seem to say very little comprehensive information in very many words. This is not

to take away from the useful role of a non-executive committee but perhaps firms should be watchful where there are a substantially high number of non-executive directors.

Another interesting find was that listing status and multiple listing negatively explain the amount of words used in the annual reports in describing the identified KPIs. On the other hand listing status does not explain comprehensiveness but multiple listing significantly and positively explains it. From this result it appears that where there is an increase in the rules regarding disclosures then companies tend to stick to '*ticking the boxes*.' In other words companies spend less effort on explaining each and every requirement as the binding rules increase, however the comprehensiveness of KPI disclosures increase with multiple listed companies. Overall the most significant variables in explaining KPI disclosure quantity and comprehensiveness include PNED, BDSIZE, DSHARE, COSIZE and PROF.

9.7 Summary and Concluding Remarks

The main objectives of this chapter were firstly; to investigate the extent to which large companies (including private limited and public listed) disclose KPIs in their annual reports in accordance with the requirements of Companies Act 2006. Secondly to investigate the extent to which company specific characteristics influence the extent of KPI disclosure, amount of words in KPI disclosures and comprehensiveness of KPI disclosures in annual reports. The third objective was to investigate whether corporate governance mechanisms significantly influence the extent of KPI disclosures, amount of words in KPI disclosures and comprehensiveness of KPI disclosures in annual reports.

From the results it is evident that just over seven in every ten companies investigated disclose at least a single KPI in their annual report. This finding also shows an upward trend in the extent of KPI reporting in comparison to previous studies therefore suggesting that the current regulation has been increasingly influential over time. It was also discovered according to the results that company size and profitability are the most influential company specific factors in determining the level of KPI disclosures, word count and comprehensiveness. The most influential corporate governance factors in determining the level of KPI disclosures, word count and comprehensiveness are the proportion of non-executive directors, board size and director share ownership.

Finally there are stark differences between the motivators of KPI disclosures and the comprehensiveness of those disclosures. It is not only important for regulations to place emphasis on the disclosure of KPIs but also the comprehensiveness and in turn usefulness of the information that is disclosed. There are also balances that need to be met in terms of executive and non-executive board members so that monitoring objectives are met but without overshadowing the work of the executive committee. Overall this chapter sets out very useful insights on KPI disclosures by large corporations operating in the UK.

Chapter 10

Summary, Implications, Conclusions, Limitations and Further Research

10 Summary, Implications, Conclusions, Limitations and Further Research

10.1 Introduction

The main objective of this research was to investigate the extent of KPIs disclosure by UK companies in response to the new regulation by the Companies Act 2006 section 417(6) (CA 2006 henceforth) requiring companies to disclose KPIs. The research had two subsidiary objectives which were firstly, to investigate the influence of corporate governance mechanisms (proportion of non-executive directors, audit committee size, number of board meetings held, director share ownership and board size) on the extent of KPIs disclosure in annual reports. Secondly, to investigate the influence of company specific characteristics (company size, gearing, profitability, liquidity, multinationality, listing status, multiple listing status) on the extent of KPI disclosures in annual reports. This chapter provides a summary and explains the implications of this research. In addition the conclusions, limitations and some possible areas of future research are highlighted.

The rest of the chapter is organised as follows: Section 10.2 provides a summary of the research which is broken down into background of the study, research objectives, research methodology and the results and explanations. Section 10.3 discusses the contributions of the study followed by section 10.4 which covers the implications of the results of the research results for policy makers, researchers and managers. Section 10.5 restates the overall conclusions of the research. In section 10.6, the limitations of the research are examined and section 10.7 discusses possible further research in the area of annual report disclosures.

10.2 Research Summary

This thesis provided both capital market based and non-capital market based theories explaining why there can be an expectation for a company to disclose information in their annual reports. These theories were also supported by details in Chapter 1 on the accounting environment in the UK and Chapter 3 with discussed Annual report users and their information needs.

The use of capital market-based theories led to the suggestion of three main reasons for listed companies to disclose information. These reasons include firstly to signal to the market in order to correctly value the company's shares, secondly; in order to reduce the risk associated with the company's shares and third; to protect from undervaluation of the company's shares. It was pointed out in Chapter 3 that the results of previous studies on the usefulness of annual reports to the market are conflicting because they suggest that annual reports are of little use for share pricing on one hand and that annual reports have some information value to the market on the other hand. One reason for arguing that annual reports are not useful is that if the markets are efficient then the annual reports are historical in nature thus come out too late to be of any use.

Non-capital market-based theories examined included the agency, stakeholder, political costs, legitimacy and stewardship theories. These theories make a contribution in highlighting that private and public listed companies both have incentives to disclose information outside of the effect of information on stock prices. These theories were used in the development of the hypotheses developed in Chapter 5 and tested in Chapters 7, 8 and 9. The proposed hypotheses were used in an attempt to identify possible causalities (corporate governance mechanisms and company specific characteristics) of KPI disclosure quantity and in annual reports.

The methodology used in this study is discussed in detail in Chapter 6. The perspectives considered in the chapter include the research philosophy, justification of the study sample, methods of estimating and the dependent variables and the models used for examining the extent of KPI disclosures in annual reports. Other considerations were scoring of the annual reports and operationalizing the independent variables.

The research philosophy adopted in this study is inclined towards the positivist approach in which the quantitative methods of data collection are considered favourable for answering the research objectives. The sample for the thesis comprises 410 large companies. The sample comprises 205 large private limited companies and 205 large public listed companies. These companies were randomly selected from an initial sampling frame of 600 companies. The sampling frame was derived from a compilation of FTSE350[71] and Top Track100[72] + Top Track 250[73] firms. The companies selected had to meet three main conditions which were firstly to be listed on the LSE or part of the Top Track 100/250. Secondly, they would have had to be constituent in their index from the 1st of January 2008 to 31st December 2008 and third; they had to be non-financial service sector firms.

The first stage of analysis involved investigating KPIs disclosure extent across three groupings which were private limited companies, public listed

[71] The FTSE350 Index is a market capitalisation weighted stock market index. It incorporates the largest 350 listed companies which have their primary listing on the LSE by order of market capitalisation. The FTSE 350 is a combination of companies from the FTSE100 and companies from the FTSE250.

[72] The Sunday Times Fast Track 100 league table ranks Britain's 100 private companies with the fastest-growing sales over their latest three years.

[73] The Sunday Times Top Track 250 league table ranks Britain's leading mid-market private companies with the biggest sales.

companies and the combination of both groups. Further to this was then satisfying the subsidiary objectives. In the case of private limited companies, due to the fact that just over one in two disclosed at least one KPI in their annual report, the decision was made to assess using logistic regression what corporate governance and company specific independent variables influenced this group of companies to make any KPI disclosures in their annual report. OLS regression was then used to test the hypotheses formulated through assessing the relationship between KPI disclosures and corporate governance & company specific characteristics for those companies that made KPI disclosures in their annual report. This separation of method between companies that disclose KPI and those that did not was done in order to meet assumptions of parametric tests such as a normal distribution in the sample data (Field, 2009, Robertson, 2012, Sedgwick).

Approximately nine in ten of the public listed firms disclosed KPIs therefore the OLS regression method was used. This method was also used in the case of the pooled set of companies; this set of companies included a random selection of 104 companies to match the 104 companies that made at least a single KPI disclosure from the group of private limited companies.

The extent of KPI disclosures were measured by an index which gave credit to the comprehensiveness of disclosures made. These KPI measurements did not only take into account the quantity. Comprehensiveness also considered attributes such as the relevant presence, amounts, reasons and forward looking information. The items examined were included in this index after pilot testing. Weights were not attached to the disclosure indexes simply because an assumption was made that annual reports have a wide array of stakeholders who look for different information therefore all the information disclosed was treated as equally important. All the information used for the

study was collected from 2008 annual reports. OLS regression analysis procedures were used to draw inferences from the data. Companies in the sample were pooled, and partitioned into unlisted and listed samples

10.2.1 Results and Explanations

10.2.1.1 Extent of KPIs Disclosure

Detailed discussions of the results on private limited companies are discussed in Chapter 7. Through a review of literature, the researcher did not identify any research that has investigated the level of KPI disclosures among large private limited firms. This study makes a contribution by investigating the level of KPI disclosures by private limited companies as explained further in section 10.3. The results indicate that just over five in every ten private firms disclose at least a single KPI in their annual reports. This figure is considerably lower to that found for public listed firms.

The level of disclosure among public listed firms investigated in the sample was approximately 90%. Just fewer than nine out of every ten firms disclosed at least a single KPI in their annual report. This figure is substantially higher than that for private limited firms. Given that the regulation to report on KPIs in annual reports by the CA 2006 covers both private and public listed firms, it appears that this regulation has differential impact on the subjects concerned. This issue is discussed further in section 10.4 which addresses the implications of this research. The results on the extent of KPI disclosures by public listed firms are discussed in detail in chapter 8.

Based on the results, approximately 70% of companies from the total sample disclose at least a KPI in their annual report. This finding demonstrates an increase

in the average level of KPI disclosures in comparison with previous results. In a 2004 study by Black Sun Plc. for example, it was found that only 19% of the companies investigated disclosed KPIs. It is worth noting that this finding was prior to the introduction of the business review mandating companies to report KPIs in their annual report. The figure almost doubled rising to 36% in a study by the same firm in the following year. There is a significant improvement based on the findings in this study. Tauringana and Mangena (2009) investigated the impact of the BR's introduction on the reporting of KPIs. They found that the extent of disclosure rose from 56% to 75% over the periods 2005 to 2007. Their findings were based on listed firms within the media industry. In comparison to the findings of this study it may also be seen that there is an improvement and approximately 90% of large listed firms disclose KPIs.

10.2.1.2 Explanatory Variables and KPI Disclosures by Private Limited Companies

Table 27: Significance of Variables Across the Three Methods

Variable	KPISCORE	WCOUNT	COMP
PNED	Yes**	Yes***	Yes*
AUDSIZE	No	No	No
BOARDM	Yes***	Yes*	No
FINEXP	Yes**	No	No
BDSIZE	Yes**	Yes***	No
DSHARE	No	Yes***	Yes**
SIZE	Yes***	Yes**	Yes*
GEAR	Yes**	Yes**	No
PROF	Yes**	Yes***	Yes**
LQDT	No	No	Yes**
MULTIN	No	No	Yes*

*. Variable significant at the 0.1 level.
**. Variable significant at the 0.05 level.
***. Variable significant at the 0.01 level.

For those companies that made KPI disclosures in their annual reports, it was found that the proportion of non-executive directors, company size and profitability significantly influence the extent and comprehensiveness of KPI disclosures as measured by all three platforms; KPI score, word count and comprehensiveness. There is only one study identified in the UK which investigated company specific factors and corporate governance mechanisms that influence the disclosure of KPIs. Tauringana and Mangena (2009) found that the proportion of non-executive directors, company size, profitability and gearing significantly influenced the disclosure of KPIs. Although this study posts similar findings, the major disagreement is the direction of the relationship between proportion of non-executive directors with the extent of KPIs disclosure. While Tauringana and Mangena (2009) found a positive relationship, this current study finds a negative relationship in the case of privately owned firms, therefore reject H^{1a}. This finding invites the suggestions that the appointment of non-executive directors within privately held firms might partly be attributed to personal relationships as opposed to merit. Where such situations occur, there is likely to be reluctance on the non-executive directors' monitoring responsibilities thereby leading to less information disclosure. Several other studies have a found a significant relationship between the level of disclosures with the proportion of non-executive directors (Chen and Jaggi, 2000, Cheng and Courtenay, 2006), company size (Domínguez, 2012) and profitability (Cormier and Gordon, 2001).

10.2.1.3 Explanatory Variables and KPI Disclosures by Public Listed Companies

Table 28: Significance of Variables Across the Three Methods

Variable	KPISCORE	WCOUNT	COMP
PNED	Yes**	No	Yes**
AUDSIZE	No	No	No
BOARDM	Yes***	Yes***	Yes***
FINEXP	No	No	No
BDSIZE	No	No	No
DSHARE	Yes***	Yes*	Yes**
SIZE	Yes***	Yes***	Yes*
GEAR	Yes***	Yes**	Yes***
PROF	Yes***	Yes*	Yes***
LQDT	Yes***	Yes**	Yes***
MULTIN	No	No	No
MLIST	No	No	Yes*

***. Significant at the 0.01 level
**. Significant at the 0.05 level
*. Significant at the 0.01 level

The results for public listed firms showed that corporate governance mechanisms (number of board meetings and director share ownership) and company specific characteristics (company size, gearing, profitability and liquidity) have a significant influence on the disclosure extent and comprehensiveness of KPIs reported in the annual reports of public listed companies. These variables proved to possess a significant association with the disclosure of KPIs across all three measures of disclosure extent used. The results are consistent with previous findings in disclosure studies such as the frequency of board meetings (Kent and Stewart, 2004) and liquidity (Belkaoui and Kahl, 1978).

10.2.1.4 Explanatory Variables and KPI Disclosures by Pooled Companies

Table 29: Significance of Variables Across the Three Methods

Variable	KPISCORE	WCOUNT	COMP
PNED	Yes***	Yes***	Yes***
AUDSIZE	Yes***	Yes**	No
BOARDM	No	No	No
FINEXP	Yes**	No	Yes**
BDSIZE	Yes***	Yes***	Yes***
DSHARE	Yes**	Yes***	Yes***
SIZE	Yes***	Yes***	Yes***
GEAR	No	Yes**	Yes**
PROF	Yes***	Yes***	Yes***
LQDT	Yes*	No	Yes***
MULTIN	No	No	No
LSTAT	No	Yes*	No
MLIST	No	Yes**	Yes***

***. Significant at the 0.01 level
**. Significant at the 0.05 level
*. Significant at the 0.1 level

In respect to the pooled set of companies, this group constitutes both private and public listed companies that disclosed KPIs in their annual reports. The results reveal that corporate governance mechanisms (proportion of non-executive directors, board size and director share ownership) and company specific characteristics (company size and profitability) are significantly related to the disclosure extent and comprehensiveness of KPIs reported in the annual reports of this group of companies. Board size for example, has been found by previous research to influence the extent of disclosures (for example Cornier et al., 2009) as well as director share ownership (for example Chau and Gray, 2002).

10.3 Research Contributions

This research makes several contributions to the area of disclosure studies in accounting research. First, the research found that the extent of KPI disclosures

among private listed firms was approximately 51%. Through a review of literature, the researcher did not identify any study that has specifically looked at KPI disclosures among large private firms hence this finding introduces fresh knowledge and evidence. The low level of disclosures by private limited companies can be explained by the fact that private limited companies have a lower shareholder base compared to public listed firms. It also then falls that their information disclosure is limited due to the limited audience. The disclosure statistic for private limited firms is low and advances in regulation perhaps need to address this problem as discussed further under research implications.

To add to this explanation, an observation made during the data collection stage is that majority of private limited companies are very secretive with information regarding their companies. It was widely observed that majority of the companies are unaware that private limited company information is publicly available through the Companies House. For this reason, it may also add to explanations of the low level of KPI disclosures among this group of companies. This research contributes by providing information on private limited companies. Research investigating private limited companies is scarce due to the difficulty and expense of acquiring the information from such.

Second, this study provides a comparison between disclosure levels of private and public listed companies. This study provides a direct comparison using a data set from a similar trading period. From the study it was noted that approximately 90% of public listed companies make at least a single KPI disclosure in their annual report. This finding may be explained by the fact that large public listed companies have a huge shareholder base and these shareholders are keen on performance information. This information also has an impact on share prices as suggested by

some event studies therefore it is a motivational factor for increased disclosures on the part of public listed companies. The research therefore makes a contribution by highlighting the stark difference between KPI disclosure levels of private limited companies (51%) and public listed companies (89%).

Third, this research makes a contribution by assessing the factors that influence private limited companies to disclose or not to disclose KPIs in their annual reports. This contribution is unique as once again the researcher has not identified a study that focuses on disclosures by private companies in the UK. The findings indicated that audit committee size, the number of board meeting, the board size, director share ownership, company size, gearing, profitability and operations in geographical regions outside of Great Britain had a significant influence on whether private limited companies disclosed KPIs in their annual report or not.

Fourth, once the researcher had identified those factors that influenced private limited companies to disclose KPIs in their annual reports. The study makes another contribution by investigating further for those companies that make any KPI disclosures in their annual reports. The study, investigates the factors that influence the level of KPI disclosures among private limited companies. It was found that both some corporate governance mechanisms (the proportion of non-executive directors and director share ownership) and some company specific characteristics (company size and profitability) had a significant influence on the level of KPI disclosures among private limited firms. These variables had an influence across all three measures used in assessing KPI disclosures. The three measures include KPI disclosure extent, word count and comprehensiveness. The research makes further contributions by also providing a comparison of the factors that influence public listed companies and the pooled set of companies.

Fifth, this research makes some methodological contributions. It is the first study to subdivide KPI disclosures into Presence, Word Count and Comprehensiveness. The manner in which KPIs are measured takes into account the traditional research index methodology. This is the second study to measure KPI disclosures using the index research methodology after Tauringana and Mangena (Tauringana and Mangena, 2009). The word count method is also used (Li et al., 2008b); this is the first of the ones identified studies to measure KPI word count. These two measures are particularly instrumental in accounting for the extent of disclosures and to a certain level the quality. The comprehensiveness method adopted, has not been previously used in measuring the quality of KPI disclosures. This method takes into account not only the amount of KPIs disclosed but three other measures such as the relevant amounts for the identified KPIs, the reasons for the changes in the KPI measures over different periods and any forward looking information regarding the KPIs. This method not only enables measurement of the extent of disclosures but the comprehensiveness of the disclosures by taking an aggregate of the different attributes of information included in the identified disclosures.

Finally, the research has two implications in the research environment. The first is that there are several studies that have investigated the extent of KPIs disclosure. However only one study has gone on to investigate the factors that influence the level of KPI disclosures (Tauringana and Mangena, 2009). This study is the first to answer calls by Tauringana and Mangena with regard to the factors that influence the disclosure of KPIs. The findings in this study are useful to future finance and accounting research concerning KPI disclosures in annual reports. Secondly, disclosure literature (e.g., Beattie et al. 2004; Beattie and Thomson 2007; Kyeyune 2010) recommend that disclosure extent measurement through content analysis ought

to be in-depth, considering repetitions, and where possible manual. This is thought to assist them in capturing the context of disclosures that are made, for instance in this case, KPI comprehensiveness. This research has adopted the recommendations and the results identify the comprehensiveness attributes of disclosures. The evidence in this thesis may provide useful insights relevant to the direction of future disclosure extent and KPIs research.

10.4 Research Implications

There is a proliferation in the amount of disclosures in annual reports. The fact that annual reports are becoming bigger over time has raised concerns amongst various stakeholders. It is agreeable with the argument raised by Kyeyune (2010), that disclosure proliferation in annual reports may lead to a negative effect in the usefulness of the information disclosed (ASB., 2005, ASB., 2006). First, this thesis was motivated by concerns raised about disclosure proliferation in financial reports and the likely negative effect on the usefulness of the information. From a policy formulating perspective, the findings of this study will provide some evidence on how comprehensive KPI disclosures are among large companies operating in the UK. The study also highlights those qualities that are influential for the disclosure of comprehensive KPI disclosures therefore this information may be instrumental to regulators when formulating policy that aims to encourage more comprehensive disclosures.

Secondly, building on the point raised in the research contribution about this study revealing the differences in extent of disclosures between private and public company disclosures in the annual reports of large companies operating in the UK; approximately 51% of private companies disclose KPIs in their annual reports while 90% of public listed companies disclose KPIs. It is important at this juncture to highlight that the requirement by CA 2006 for companies to disclose KPIs in their

annual reports includes both private and public listed companies. It is clear from the findings that this regulation does not have the same impact between the two groups concerned. This study suggests that perhaps it would be necessary to tailor certain disclosure regulations depending on category in order to achieve the desired effect by the regulation. By providing the factors that influence private and public listed companies to disclose KPIs, regulators may also have a greater awareness what are the characteristics of the companies that disclose KPIs thereby making it clear what are the characteristics of the companies that would require to be targeted in order to ensure that new disclosure regulations are effectively received.

Third, the results suggest that there are systematic differences in the corporate reporting by large UK listed firms as supported by Kyeyune (2010). The existence of these systematic differences can be construed as the existence of equilibrium in the market for corporate disclosure (Wallace et al., 1994a). As seen from the results, larger companies provide more KPI disclosures than smaller companies. The economic solution that allows large UK firms on the London Stock Exchange to provide more detail in their accounts than other firms may be considered undesirable in a country where there are more small firms. Other authors (Foster, 1978) have recommended that regulation should intervene in such situations so that the anomaly may be corrected.

Fourth, part of the overall results of this research revealed that listed companies revealed more KPI information than unlisted companies. This finding of the listing status explanatory variable may imply that regulators require taking action in order to ensure that it becomes a mandatory measure for unlisted firms to disclose similar information to public listed companies. Although it may be argued that public listed company shares are traded by the public hence the public are likely to

demand more information from them in their annual reports. It may also be argued that private limited companies constitute approximately 97% of all businesses therefore private limited companies have a greater impact on the public. For that reason both sets of companies have substantial information demand hence the requirement is binding to both private and public listed firms. This adds to the argument posited for the extent of disclosure measured for private limited and public listed entities' KPI disclosures. It may be suggested that companies will not necessarily face any additional cost to ensure that they make increased disclosures because some private companies are already making these required KPI disclosures in their annual reports. It will, however, be important that more research is undertaken to determine if there is need for more information by the users of the unlisted companies before such action is taken, this sentiment is also echoed by other recent studies (Kyeyune, 2010).

The results of the study highlight that company size significantly explains the level of KPI disclosures in all three types of models for private, public and the pooled set of companies. Due to this finding it may be recommended that authorities may take three courses of action. The first being to have a two tier system that ensures that smaller companies provide sufficient disclosures as per a requirement that is tailored in such a way that they are not constrained. The reporting requirements may thus be split depending on the size of the companies involved. The second recommendation may be to set a minimum level of KPI disclosures regardless of company size to ensure that some companies do not work around this requirement. The third recommendation would be for authorities to ensure to provide or ensure that all companies concerned have the appropriate resources without placing marginal burdens in order to meet the legal reporting requirements.

10.5 Limitations of the Research

The findings and conclusions to be drawn from this research must be interpreted in the light of the limitations of the study. This study is based on disclosure investigations from annual reports. It is important to bear in mind that there are many sources for financial disclosures. Some of these sources include disclosures in interim reports, press releases and web based disclosures to mention a few. The results of this study are restricted to the remits of annual report disclosures in annual reports only and therefore should not extrapolated to other forms of disclosures, and if this is done then precaution needs to be considered.

The use of a voluntary disclosure index in this research has its limitations. The voluntary disclosure index was intended to capture the extent of disclosures but because there are so many items disclosed by the companies it was not possible to include every item disclosed by each company. This may have influenced the results. However, as discussed in Chapter 6, steps were taken to ensure and check whether the voluntary disclosure index was representative of the various disclosure items made by the different companies.

This research makes use of cross sectional data. Although this data is useful and provides a lot of information with regards answering the research questions, the data set provides a snapshot when compared with panel data. There were many complications in acquiring the data for this study particularly that relating to private limited companies where in some instances responses from the relevant companies had to be awaited upon. In the case of the data that was readily available, it still took a lot of time to score the annual reports therefore it would have been impractical to use panel data.

There were a high number of models used in this study. Measurement methods were constructed for KPISCORE, word count and comprehensiveness; these three models were then tailored and applied to private limited companies, public listed companies and the pooled set of companies. Due to the high number of models applied, it was inevitable that some results would conflict and this made it difficult to interpret the few conflicting results. There are also other variables that could have been tested for example industry, auditor size, role duality, family ownership etc. For practicality reasons the amount of variables were limited to the most popular ones based on previous research in this area. Some of them such as auditor size were not included because the sample for this study is based on large companies. Large companies on average tend to use the big four auditing firms therefore there would be very little variation which would not yield significant results in explaining KPI disclosures.

Another limitation of the study is the lack of concentration on one user group. This could be remedied by ascertaining a specific user groups' information values reflecting these in weightings of the items of disclosure in the model. These values could have been investigated through means of a survey. The process would have had two main disadvantages, firstly, it can be a time consuming process in which the response rate is not guaranteed. Secondly, as argued in Chapter 3, information disclosed in annual reports is meant for many user groups and selection of certain items of information as being meant for a particular group may be subjective.

The global financial crisis (GFC) of 2007-2008 is considered by many to be the worst since the Great Depression in the 1930's. The crisis which was triggered by a collapse in subprime mortgage lending resulted in the downfall of large financial institutions, some of which were bailed out by national governments for

example the Royal Bank of Scotland (RBS) in the UK. The crisis played a significant role in the decline and failure of key businesses leading to a global recession. As the data used for this research was collected form 2008 annual reports, there is a high prospect that there are some anomalies due to the crisis. The GFC would count as a limitation to this research particularly where results are compared with previous studies. Secondly any generalisations would need to be handled with caution.

10.6 Further Research

This study has explored some new areas and these areas may warrant more research in order to build on the investigations and understanding. Firstly, this research has made use of cross-sectional data; it may be useful if in the future there was an exploration using panel data perhaps covering periods since the introduction of the requirement by the CA 2006 to disclose KPIs through to the current trends. The variables used in this research therefore represent one period of time. To understand any phenomenon it may also be helpful if the investigation covered data observed over a longer period.

KPIs are known to be company and industry specific. Inclusion of industry variables would have resulted in too many variables therefore distorting the models. It is therefore in this context important in future research to investigate the influence of corporate governance mechanisms and company specific characteristics on the level of KPI disclosures within specific industry groupings. This would best be done as a separate research focusing on the impact of industry on KPI disclosures. This would help to ascertain whether some industries better adhere to KPI disclosure regulations and also the characteristics of the companies that are better or worse at

disclosing KPI information. There is one identified study that has investigated the factors that influence the disclosure of KPIs in which the sample was based on the media industry (Tauringana and Mangena, 2009). Further studies could consider measuring the quantity and comprehensiveness of disclosures within different industries, for example using the word count method and the comprehensiveness method such as the ones used in this study

Due to the importance of KPIs and the push for centralised regulatory orders such as the EU directives on financial reporting, it may be interesting to extend the study to the European context. This will not only provide details of how companies in different geographical regions adopt centralised regulation but will offer a direct comparison between different countries. The differences between the level of disclosures in response to regulation and factors that influence the level of disclosure may enlighten about cultural differences in the business context, therefore lessons might be learnt on various dimensions.

It is important to extend the investigation on the influence of corporate governance mechanisms and company characteristics on disclosures not only in annual reports but other media such as the internet and interim reports. The annual report is only one medium of communication, different stakeholders are progressively looking to other means in addition to become informed about their interests. As a consequence of this situation, it can be beneficial for instance to investigate the usefulness of the annual report versus alternative media. It will also be interesting to investigate whether similar properties that influence disclosures in annual reports are the ones that influence disclosures elsewhere for instance the company website. This type of research would not only be executed in the UK but extended to an international context.

The current study takes a purely quantitative approach in the investigations conducted. Through the use of comprehensiveness attributes for future research such as the use of interviews and questionnaires, then it would be useful to investigate the opinions and feelings of KPI users. Such insights would provide direct knowledge from the users of the information as opposed to highlighting the importance of KPIs from the regulators' and management perspectives.

Finally, there has been great deliberation among standard setters and regulators over the root causes of the GFC. It has been suggested that inaccurate accounting standards may be a contributing factor. Since 2008 many important standards have been and are in development through the joint work of the FASB and IASB particularly around fair value accounting (FVA). This situation may have led to stronger disclosure regulations. In addition, the legitimacy theory suggests that corporate disclosures react to economic, social and political factors and therefore assist in explaining the motivations for disclosures. Large companies such as the ones investigated in this study are likely to increase the level of disclosure as a means of self-regulation to avoid summoning by accounting bodies which may be restrictive. As a point of future research, annual reports from 2011/12 will be analysed to find out whether the results yielded are similar or significantly different.

References

2006. Companies Act. http://www.legislation.gov.uk/ukpga/2006/46/contents [Accessed on 22.06.2011].

A.A.A. 1977. Statement on Accounting Theory and Theory Acceptance. Committee on Concepts and Standards for External Financial Reports. *American Accounting Association,* Florida, USA. .

A.I.C.P.A. 1970. Accounting Principles Board: Basic Concepts and Accounting Principles Underlying Financial Statements of Business Enterprises. *American Institute of Certified Public Accountants* 4.

A.S.B. 1991. The Objectives of Financial Statements and the Qualitative Characteristics of Financial Information. . *Accountancy: Accounting Standards Board,* 108**,** 99-105.

A.S.S.C. 1975. The Corporate Report. A Discussion Paper Published for Comment by the Accounting Standards Steering Committee. *Accounting Standards Steering Committee,* London.

ABBOTT, L. J., PARK, L. Y. & PARKER, S. 2000. The Effects of the Audit Committee Activity and Independence on Corporate Fraud. *Managerial Finance,* 26**,** 55-67.

ABBOTT, L. J., PARKER, S. & PETERS, G. F. 2004. Audit Committee Characteristics and Restatements. *Auditing: A Journal of Practice & Theory,* 23**,** 69-87.

ABBOTT, W. F. & MONSEN, R. J. 1979. On the measurement of Corporate Social Responsibility: Self-Reported Disclosure as a Method of Measuring Corporate Social Involvement. *Academy of Management Journal,* 22**,** 501-515.

ABDUL HALIM, H. & BAXTER, T. 2010. Voluntary Disclosure of Intangibles among Australian Publicly Listed Companies. *Global Review of Accounting and Finance,* 1**,** 60-76.

ABEYSEKERA, I. 2010. The Influence of Board Size on Intellectual Capital Disclosure by Kenyan Listed Firms. *Journal of Intellectual Capital,* 11**,** 504-518.

ABOAGYE-OTCHERE, F., BEDI, I. & KWAKYE, K. O. 2012. Corporate Governance and Disclosure Practices of Ghanaian Listed Companies. *Journal of Accounting in Emerging Economies,* 2.

ABURAYA, R. K. 2012. The Relationship Between Corporate Governance And Environmental Disclosure: UK Evidence. *Doctoral thesis, Durham University. Available at Durham E-Theses Online: http://etheses.dur.ac.uk/3456/*.

ACCOUNTING STANDARDS BOARD 2006. Operating and Financial Review. Accounting Standards Board.

ACCOUNTING STANDARDS BOARD 2007. A Review of Narrative Reporting by UK Listed Companies in 2006. ASB.

ACERETE, B., LLENA, F. & MONEVA, J. M. 2011. Environmental Disclosure in Financial Statements: An Analysis of Spanish Toll Motorway Concessionaires. *Transportation Research Part D: Transport and Environment,* 16**,** 377-383.

AERTS, W. & CORMIER, D. 2009. Media Legitimacy and Corporate Environmental Communication Accounting. *Organizations and Society,* 34**,** 1-27.

AHMAD, Z., HASSAN, S. & MOHAMMAD, J. 2003. Determinants of Environmental Reporting in Malaysia. *International Journal of Business Studies,* 11**,** 69-90.

AHMED, K. & COURTIS, J. K. 1999. Associations Between Corporate Characteristics and Disclosure Levels in Annual Reports: A Meta-Analysis. *The British Accounting Review,* 31**,** 35-61.

AHMED, K. & NICHOLLS, D. 1994. The Impact of Non-Financial Company Characteristics on Mandatory Disclosure Compliance in Developing Countries: The Case of

Bangladesh. *The International Journal of Accounting and Business Research,* 29**,** 62-77.
AICPA. 2005. Private Company Financial Reporting. Available: http://www.aicpa.org/InterestAreas/FRC/AccountingFinancialReporting/PCFR/DownloadableDocuments/PCFR%20backgrounder_eBook.pdf [Accessed 20.06.2012].
AKERLOF, G. A. 1970. The Market for 'Lemons': Quality Uncertainty and the Market Mechanism. *The Quarterly Journal of Economics,* 83**,** 488-500.
AKHIGBE, A. & MARTIN, A. D. 2006. Valuation Impact of Sarbanes–Oxley: Evidence from Disclosure and Governance Within the Financial Services Industry. *Journal of Banking & Finance,* 30**,** 989-1006.
AKINS, B. K., NG, J. & VERDI, R. S. 2012. Investor Competition Over Information and the Pricing of Information Asymmetry. *Accounting Review,* 87**,** 35-58.
AL-KHADASH, H. A. & ABHATH AL-YARMOUK, A. 2003. The Accounting Disclosure of Social and Environmental Activities: A Comparative Study for the Industrial Jordanian Shareholding Companies. *Humanities and Social Sciences,* 19**,** 21-39.
ALCHIAN, A. A. 1968. *Corporate Management and Property Rights. In Economic Policy and the Regulation of Securities,* Washington, D.C, American Enterprise Institute.
ALCHIAN, A. A. & DEMSETZ, H. 1972. Production, Information Costs, and Economic Organisation. *American Economic Review of Accounting Studies,* 62**,** 777-795.
ALJIFRI, K. & HUSSAINEY, K. 2007. The determinants of forward-looking information in annual reports of UAE companies. *Managerial Auditing Journal,* 22**,** 881 - 894.
ALLEE, K. D., BHATTACHARYA, N., BLACK, E. L. & CHRISTENSEN, T. E. 2007. Pro Forma Disclosure and Investor Sophistication: External Validation of Experimental Evidence Using Archival Data. *Accounting, Organizations and Society,* 32**,** 201-222.
ALSAEED, K. 2006. The Association Between Firm-specific Characteristics and Disclosure: The Case of Saudi Arabia. *Managerial Auditing Journal,* 21**,** 476-496.
ALVAREZ, A. 2011. Company Characteristics and Human Resource Disclosure in Spain. *Social Responsibility Journal,* 8**,** 2.
ALVES, S. & MARTINS, J. 2010. The Impact of Intangible Assets on Financial and Governance Policies: UK Evidence. *International research journal of finance and economics*.
AN, Y., HOWARD, D. & EGGLETON, I. R. C. 2011. The Effects of Industry Type, Company Size and Performance on Chinese Companies' IC Disclosure: A Research Note. *Australasian Accounting Business & Finance Journal,* 5**,** 107-116.
ANDERSON, R. & EPSTIEN, M. 1995. The Usefulness of Annual Reports. *Australian Accountant,* 63**,** 25.
ANDERSON, R. C., MANSI, S. A. & REEB, D. M. 2004. Board Characteristics, Accounting Report Integrity, and the Cost of Debt. *Journal of Accounting and Economics,* 37**,** 315-342.
ANDERSON, R. H. 1979. The Usefulness of Annual Reports to Australian Investors. *A paper presented at the Accounting Association of Australia and New Zealand Conference, University of Melbourne, Australia.* .
ANDERSON, R. W. & CARVERHILL, A. 2012. Corporate Liquidity and Capital Structure. *Review of Financial Studies,* 25**,** 797-837.
ANDRIKOPOULOS, A. & KRIKLANI, N. 2012a. Environmental Disclosure and Financial Characteristics of the Firm: The Case of Denmark. *Corporate Social Responsibility and Environmental Management***,** n/a-n/a.
ANDRIKOPOULOS, A. & KRIKLANI, N. 2012b. Environmental Disclosure and Financial Characteristics of the Firm: The Case of Denmark. *Corporate Social Responsibility and Environmental Management*.

ANGELOANTONIO, R. & FRANCESCO, P. 2010. Investigating Stakeholder Theory and Social Capital: CSR in Large Firms and SMEs. *Journal of Business Ethics,* 91**,** 207-221.
ANSOFF, I. 1965. *Corporate Strategy,* New York, McGraw-Hill.
ARIPIN, N., TOWER, G. & TAYLOR, G. 2008. The Determinants of Financial Ratio Disclosures and Quality: Australian Evidence. *Accounting & Finance Association of Australia and New Zealand Annual Conference (AFAANZ).* Australia.
ARMSTRONG, C. S., CORE, J. E., TAYLOR, D. J. & VERRECCHIA, R. E. 2011. When Does Information Asymmetry Affect the Cost of Capital? *Journal of Accounting Research,* 49**,** 1-40.
ASB 1997. Statement of Interim Reports. *Accounting Standards Board (ASB)*.
ASB 2006a. Operating and Financial Review. Accounting Standards Board.
ASB 2006b. Reporting Statement: Operating and Financial Review. *Accounting Standards Board*.
ASB. 2005. Operating and Financial review: Reporting Standard 1. *London: Accounting Standards Board*.
ASB. 2006. Operating and Financial review: Reporting Standard 1. *London: Accounting Standards Board*.
ATRILL, P. F. 1986. An Examination of the Role, Content and Utility of Published Interim Financial Reports. *Unpublished Doctoral Thesis, Brunel University*.
BABÍO ARCAY, M. R. & MUIÑO VÁZQUEZ, M. F. 2005. Corporate Characteristics, Governance Rules and the Extent of Voluntary Disclosure in Spain. *Advances in Accounting,* 21**,** 299-331.
BABYAK, M. A. 2004. What You See May Not Be What You Get: A Brief, Nontechnical Introduction to Overfitting in Regression-type Models. *Psychosomatic Medicine: Journal of Biobehavioral Medicine,* 66**,** 411-421.
BAIMAN, S. 1990. Agency Research in Managerial Accounting: A Second Look. *Accounting, Organizations and Society,* 15**,** 341-371.
BAKER, H. K. & HASLEM, J. A. 1973. Information Needs of Individual Investors. *Journal of Accountancy,* November, 136**,** 64-69.
BALL, R. 1978. Anomalies in Relationship Between Securities: Yields and Yield Surrogates. *Journal of Financial Economics,* 6**,** 103-112.
BALL, R. & BROWN, P. 1968. An empirical evaluation of accounting income numbers. *Journal of Accounting Research,* 6**,** 159-178.
BALL, R. & FOSTER, G. 1982. Corporate Financial Reporting: A Methodological Review of Empirical Research. *Journal of Accounting Research,* 20 (suppl)**,** 161-234.
BAMBER, E. M. & STRATTON, R. A. 1997. The information content of the uncertainty-modified audit report: Evidence from bank officers. *Accounting Horizons,* 11**,** 1-11.
BANSAL, P. & CLELLAND, I. 2004. Talking Trash: Legitimacy, Impression Management and Unsystematic Risk in the Context of the Natural Environment. *Academy of Management Journal (pre-1986),* 47**,** 93-103.
BAR-YOSEF, S. & LIVNAT, J. 1984. Auditor selection: An incentive signalling approach. *Accounting and Business Research,* 14**,** 301-309.
BARAKO, D. G. 2004. *Voluntary corporate disclosure by Kenyan companies: A longitudinal exploratory study.* Degree of Doctor Philosophy, The University of Western Australia.
BARAKO, D. G., HANCOCK, P. & IZAN, H. Y. 2006a. Factors Influencing Voluntary Corporate Disclosure by Kenyan Companies. *Corporate Governance: An International Review,* 14**,** 107 - 125.

BARAKO, D. G., HANCOCK, P. & IZAN, H. Y. 2006b. Factors Influencing Voluntary Corporate Disclosure by Kenyan Companies. *Corporate Governance: An International Review,* 14**,** 107-125.
BARAKO, D. G., HONCOCK, P. & IZAN, H. Y. 2006c. Factors influencing voluntary corprate disclosures by Kenyan companies. *2006,* 14**,** 107-125.
BARKER, R. 1998a. The Market for Information-Evidence from Finance Directors, Analysts and Fund Managers. *Accounting and Business Research,* 29**,** 3-20.
BARKER, R. 1998b. The Market for Information: Evidence From Finance Directors, Analysts and Fund Managers. *Accounting and Business Research,* 29**,** 3-20.
BARNEY, J. B. & HESTERLY, W. S. 2010. *Strategic Management and Competitive Advantage*, Prentice Hall.
BARRY, C. & BROWN, S. 1985. Differential information and security market equilibrium. *Journal of Financial and Quarterly Analysis,* December**,** 407-422.
BARRY, C. B. & BROWN, S. J. 1986. Limited Information as a Source of Risk. *Journal of Portfolio Management,* Winter**,** 66-72.
BATHALA, C. T. & RAO, R. P. 1995. The determinants of board composition: An agency theory perspective. *Managerial and Decision Economics,* 16**,** 59-69.
BAUMOL, W. J. 1959. *Business Behaviour, Value and Growth,* USA, MacMillan.
BAYSINGER, B. & HOSKISSON, R. E. 1990. The composition of boards of directors and strategic control: Effects on corporate strategy. *Academy of Management Review,* 15**,** 72-87.
BEASLEY, M. S. 1996. An Empirical Analysis of the Relation Between the Board of Director Composition and Financial Statement Fraud. *Accounting Review,* 71**,** 443-465.
BEATHAM, S., ANUMBA, C. & THORPE, T. 2004. KPIs: A Critical Appraisal of their use in Construction. *Benchmarking: An International Journal,* 11**,** 93-117.
BEATTIE, V., MCINNES, B. & FEARNLEY, S. 2004a. A Methodology For Analysing And Evaluating Narratives In Annual Reports: A Comprehensive Descriptive Profile And Metrics For Disclosure Quality Attributes. *Accounting Forum,* 28**,** 205–236.
BEATTIE, V., MCINNES, B. & FEARNLEY, S. 2004b. A Methodology for Analysing and Evaluating Narratives in Annual Reports: A Comprehensive Descriptive Profile and Metrics for Disclosure Quality Attributes. *Accounting Forum,* 28**,** 205-236.
BEATTIE, V. & PRATT, K. 2002. Voluntary Annual report Disclosures: What Users Want. The Institute of Chartered Accountants of Scotland.
BEATTIE, V. & THOMSON, S. J. 2007. Lifting the Lid on the use of Content Analysis to Investigate Intellectual Capital Disclosures. *Accounting Forum,* 31**,** 129-163.
BEATTIE, V. J. & JONES, M. 1992. The Use and Abuse of Graphs in Annual Reports: Theoretical Framework and Empirical Study. *Accounting and Business Research,* 22**,** 291.
BEAVER, W. 1968a. The information content of annual earnings announcements. *Journal of Accounting Research,* Supplement**,** 67-92.
BEAVER, W. 1968b. The information content of annual earnings announcements. *Journal of Accounting Research: Supplement,* 6**,** 67-92.
BÉDARD, J., CHTOUROU, S. H. & COURTEAU, L. 2004. The Effect of Audit Committee Expertise, Independence and Activity on Aggressive Earnings Management. *Auditing: A Journal of Practice & Theory,* 23**,** 13-35.
BELAIRE-FRANCH, J. & OPONG, K. K. 2005. A variance ratio test of the behaviour of some FTSE equity indices using ranks and signs. *Review of Quantitative Finance and Accounting,* 24**,** 93-107.
BELKAOUI-RIAHI, A. & KAHL, A. 1978. Corporate Financial Disclosure in Canada. *Vancouver: Research Monograph of the Canadian Certified General Accountants Association*.

BELKAOUI, A. & KAHL, A. 1978. Corporate financial disclosure in Canada. *CCGAA Research Monograph*.
BEN-AMAR, W. & ZEGHAL, D. 2011. Board of Directors' Independence and Executive Compensation Disclosure Transparency: Canadian Evidence. *Journal of Applied Accounting Research,* 12**,** 43-60.
BENCE, D., HAPESHI, K. & HUSSEY, R. 1995. Examining Investment Information Sources for Sophisticated Investors Using Cluster Analysis. *Accounting and Business Research,* 26**,** 19-26.
BENNETT, E. M., ALPERT, R. & GOLDSTEIN, A. C. 1954. Communications through Limited Response Questioning. *Public Opinion Quarterly,* 18**,** 303-308.
BERETTA, S. & BOZZOLAN, S. 2008. Quality Versus Quantity: The Case of Forward-looking Disclosure. *Journal of Accounting, Auditing & Finance,* 23**,** 333-375.
BERGER, P. G. & HANN, R. 2003. The Impact of SFAS No. 131 on Information and Monitoring. *Journal of Accounting Research,* 41**,** 163-223.
BERGMAN, N. K. & ROYCHOWDHURY, S. 2008. Investor Sentiment and Corporate Disclosure. *Journal of Accounting Research,* 46**,** 1057-1083.
BERLE, A. & MEANS, G. 1932. *The Modern Corporation and Private Property,* New York, Macmillan.
BERNARD, V. L. & THOMAS, J. K. 1989. Post-Earnings Announcement Drift: Delayed Price Response or Risk Premium? *Journal of Accounting Research,* 27, Supplement**,** 1-36.
BEWLEY, K. & LI, Y. 2000. Disclosure of Environmental Information by Canadian Manufacturing Companies: A Voluntary Disclosure Perspective. *Advances in Environmental Accounting and Management,* 1**,** 201-236.
BIGGS, S. F. 1984. Financial Analysts' Information Search in the Assessment of Corporate Earning Power. *Accounting, Organizations and Society,* 9**,** 313-323.
BINGFA, Z., YING, L. & LEI, Z. An Empirical Research on the Voluntary Disclosure of Chinese Electronic Listed Companies' Information. 2nd International Conference on Artificial Intelligence, Management Science and Electronic Commerce (AIMSEC), 2011. 4935-4938.
BIRNBAUM, P. 1984. The choice of strategic alternatives under increasing regulationin high technology industries. *Academy of Management Journal,* 27**,** 489-510.
BLACK SUN PLC 2006. The First 23 - Reporting under the Business Review. Analysis of the 23 March Year End FTSE 100 Companies. London: Black Sun Plc.
BOESSO, G. & KUMAR, K. 2007. Drivers of corporate voluntary disclosures. *Accounting, Auditing & Accountability Journal,* 20**,** 269-296.
BOTOSAN, C. A. 1997. Disclosure Level and the Cost of Equity Capital. *The Accounting Review,* 72**,** 323-349.
BOTOSAN, C. A. 2006. Disclosure and the cost of equity capital: what do we know? *Accounting and Business Research,* (International Accounting Forum)**,** 31-40.
BOTOSAN, C. A. & PLUMLEE, M. A. 2002. A Re-examination of Disclosure Level and the expected Cost of Equity Capital. *Journal of Accounting Research,* 40**,** 21-40.
BOUMA, G. D. & ATKINSON, G. B. J. 1999. *A hand book of social science research,* Oxford, Oxford University Press.
BOYATZIS, R. E. 1998. *Transforming qualitative information: Thematic analysis and code development* CA, Oaks Thousand :Sage Publications.
BOYNE, G. & LAW, J. 1991. Accountability and Local Authority Annual Report: The Case of Welsh District Councils. *Financial Accountability & Management,* 7**,** 179-194.
BOZZOLAN, S., FAVOTTO, F. & RICCERI, F. 2003. Italian Annual Intellectual Capital Disclosure: An Empirical Analysis. *Journal of Intellectual Capital,* 4**,** 543-558.

BOZZOLAN, S., O'REGAN, P. & RICCERI, F. 2006. Intellectual capital disclosure (ICD): a comparison of Italy and the UK. *Journal of Human Resource Costing & Accounting,* 10**,** 92-113.
BRADBURY, M. E. 1991. Characteristics of Firms and Voluntary Interim Earnings Disclosures: New Zealand Evidence. *Pacific Accounting Review,* 3**,** 37-62.
BRADBURY, M. E. 1992. Voluntary Disclosure of Financial Segment Data: New Zealand, Evidence. *Accounting and Finance,* 32**,** 15-26.
BRAMMER, P. & PAVELIN, S. 2006. Voluntary environmental disclosures by large UK companies. *Journal of Business Finance & Accounting,* 33**,** 1168-1188.
BRAMMER, S. & PAVELIN, S. 2004. Building a Good Reputation. *European Management Journal,* 22**,** 704-713.
BRANCO, M. & RODRIGUES, L. 2008. Factors Influencing Social Responsibility Disclosure by Portuguese Companies. *Journal of Business Ethics,* 83**,** 685-701.
BRANCO, M. C., DELGADO, C., SOUSA, C. & SA, M. 2011. Intellectual capital disclosure media in Portugal. *Corporate Communications: An International Journal,* 16**,** 38-52.
BREALEY, R. A. 1970. The distribution and independence of successive rates of return from the British equity market. *Journal of Business Finance & Accounting,* 2**,** 29-40.
BRENNAN, N. 2001. Reporting Intellectual Capital in Annual Reports: Evidence from Ireland. *Accounting, Auditing & Accountability Journal,* 14**,** 423-436.
BRENNAN, N. & HOURIGAN, D. 2000. Corporate Reporting on the Internet by Irish Companies. *Irish Accounting Review,* 7.
BRETON, G. & TAFFLER, R. 2001. Accounting Information and Analyst Stock Recommendation Decisions: A Content Analysis Approach. *Accounting and Business Research,* 31**,** 91-102.
BRICKLEY, J. A., BHAGAT, S. & LEASE, R. C. 1985. The Impact of Long-Range Managerial Compensation Plans on Shareholder Wealth. *Journal of Accounting Economics,* 7**,** 115-129.
BRÜGGEN, A., VERGAUWEN, P. & DAO, M. 2009. Determinants of Intellectual Capital Disclosure: Evidence from Australia. *Management Decision,* 47**,** 233-245.
BUKH, P., GORMSEN, P. & MOURITSEN, J. 2001a. Intellectual Capital Reports on their way to the Stock Exchange. *Aarhus School of Business.* Aarhus.
BUKH, P., GORMSEN, P. & MOURITSEN, J. 2001b. Constructing Intellectual Capital Statements. *Scandanavian Journal of Management,* 17**,** 87-108.
BUKH, P. N., NIELSEN, C., GORMSEN, P. & MOURITSEN, J. 2005. Disclosure of Information on Intellectual Capital in Danish IPO Prospectuses. *Accounting, Auditing & Accountability Journal,* 18**,** 713-732.
BUZBY, S. L. 1974. Selected Items of Information and Their Disclosure in Annual Reports. *The Accounting Review,* 49**,** 423-435.
BUZBY, S. L. 1975. Company Size, Listed Versus Unlisted Stocks, and the Extent of Financial Disclosure. *Journal of Accounting Research,* 13**,** 16-37.
BYRD, J. & HICKMAN, K. 1992. Do Outside Directors Monitor Managers? Evidence From Tender Offer Bids. *Journal of Financial Economics,* 32**,** 195-222.
BYRD, J., JOHNSON, M. & JOHNSON, M. 1995. Investor relations and the cost of capital. *Working paper, University of Michigan, Ann Arbor, MI.*
CADBURY REPORT 1992. Report of the Committee on the Financial Aspects of Corporate Governance: The Code of Best Practice. *Accountancy,* 111.
CAMFFERMAN, K. & COOKE, T. 2002. An Analysis of Disclosure in the Annual Reports of UK and Dutch Companies. *Journal of International Accounting Research,* 1**,** 3-30.

CARAMANOLIS-COTELLI, B., GARDIOL, L., GIBSON-ASNER, R. & TUCHSCHMID, N. 1999. Are Investors Sensitive to the Quality and the Disclosure of Financial Statements. *European Finance Review,* 3**,** 131-159.
CARSON, E. 1996. Corporate Governance Disclosure in Australia: The State of Play. *Australian Accounting Review,* 6**,** 3-10.
CERF, R. A. 1961. *Corporate Reporting and Investment Decisions,* Berkeley, CA, University of California Press.
CHAGANTI, R. S. 1985. Corporate Board Size, Composition and Corporate Failures in Retailing Industry. *Journal of Management Studies,* 22**,** 400-417.
CHAN, K. C. & LI, J. 2008. Audit Committee and Firm Value: Evidence on Outside Top Executives as Expert-Independent Directors. *Corporate Governance: An International Review* 16**,** 16-31.
CHANG, L. S. & MOST, K. S. 1977. Investor Uses of Financial Statements: An Empirical Study. *Singapore Accountant,* 12**,** 83-91.
CHANG, L. S., MOST, K. S. & BRAIN, C. W. 1983. The Utility of Annual Reports: An International Study. *Journal of International Business Studies,* 14**,** 63-84.
CHAPPLE, L., KENT, P. & ROUTLEDGE, J. 2012. Board Gender Diversity and Going Concern Audit Opinions: Financial Markets & Corporate Governance Conference. Available: http://ssrn.com/abstract=1979040 or http://dx.doi.org/10.2139/ssrn.1979040.
CHAU, G. K. & GRAY, J. S. 2002a. Ownership structure and corporate voluntary disclosures in Hong Kong and Singapore. *The International Journal of Accounting,* 37**,** 247-265.
CHAU, G. K. & GRAY, S. J. 2002b. Ownership Structure and Corporate Voluntary Disclosure in Hong Kong and Singapore. *The International Journal of Accounting,* 37**,** 247-265.
CHAVENT, M., DING, Y., FU, L., STOLOWY, H. & WANG, H. 2006. Disclosure and determinant studies: an extention of using the divisive clustering method (DIV). *European Accounting Review,* 15**,** 181-218.
CHEN, C. J. P. & JAGGI, B. 2000. Association Between Independent Non-executive Directors, Family Control and Financial Disclosures in Hong Kong. *Journal of Accounting and Public Policy,* 19**,** 285-310.
CHEN, S., DEFOND, M. L. & PARK, C. W. 2002. Voluntary Disclosure of Balance Sheet Information in Quarterly Earnings Announcements. *Journal of Accounting and Economics,* 33**,** 229-251.
CHENG CHEE MUN, E., COURTENAY, S. M. & RAHMAN, A. R. 2011. Effects of Prior Voluntary Disclosure on Earnings Announcements in an Environment with Low Information and Regulation. *Pacific-Basin Finance Journal,* 19**,** 308-329.
CHENG, E. C. M. & COURTENAY, S. M. 2004. Board Composition, Regulatory Regime and Voluntary Disclosure. *Working Paper. Singapore: Nanyang Business School, Nanyang Technological University.*
CHENG, E. C. M. & COURTENAY, S. M. 2006. Board Composition, Regulatory Regime and Voluntary Disclosure. *International Accounting Journal of Accounting,* 14**,** 262-289.
CHENHALL, R. H. & JUCHAU, R. 1977. Investor Information Needs: An Australian Study. *Accounting and Business Research,* 7**,** 111-119.
CHIANG, M.-H. & LIN, J.-H. 2007. The Relationship between Corporate Governance and Firm Productivity: evidence from Taiwan's manufacturing firms. *Corporate Governance: An International Review,* 15**,** 768-779.
CHO, C. H. & PATTEN, D. M. 2007. The Role of Environmental Disclosures as Tools of Legitimacy: A Research Note. *Accounting, Organizations and Society,* 32**,** 639-647.
CHOI, F. & MUELLER, G. 1992. *International Accounting,* London, Prentice Hall.
CHOI, F. D. S. 1973. Financial Disclosure in Relation to a Firm's Capital Costs. *Accounting and Business Research,* 3**,** 282-292.

CHOW, C. W. 1982. The Demand for External Auditing: Size, Debt and Ownership Influences. *The Accounting Review,* 57**,** 272-291.
CHOW, C. W. & WONG-BOREN, A. 1987. Voluntary financial disclosure by Mexican corporations. *The Accounting Review,* 62**,** 533-541.
CLARK, R. C. 1985. *Agency Costs versus Fiduciary Duties,* Boston, Harvard Business School Press.
CLARKSON, P. M., LI, Y., RICHARDSON, G. D. & VASVARI, F. P. 2008. Revisiting the Relation Between Environmental Performance and Environmental Disclosure: An Empirical Analysis. *Accounting, Organizations and Society,* 33**,** 303-327.
CLIFT, R. C. 1973. An Investigation Into the Nature and Quality of Information Utilised by Advisers in the Stock-broking Industry in Victoria. *Unpublished Ph.D. Dissertation, University of Melbourne, Australia.*
CLIFTON, D. & AMRAN, A. 2011. The Stakeholder Approach: A Sustainability Perspective. *Journal of Business Ethics,* 98**,** 121-136.
CLOYD, C. B., FREDERICKSON, J. F. & HILL, J. W. 1998. Independent auditor litigation: Recent events and related research. *Journal of Accounting and Public Policy,* 17**,** 121-142.
COAKES, S. J. & STEED, L. G. 2001. *SPSS Analysis without Anguish, Version 10.0 for Windows,* Brisbane, John Wiley.
COHEN, J. 1960. A coefficient of agreement for nominal scales. *Educational and Psychological Measurement,* 20**,** 37 - 46.
COHEN, J. 1968. Weighted kappa: Nominal scale agreement with provision for scaled disagreement of partial credit. *Psychological Bulletin,* 70**,** 213 - 222.
COHEN, J. 1988. *Statistical Power Analysis for the Behavioural Sciences,* Hillsdale, NJ, Lawrence Earlbaum Associates.
COLEMAN, I. & ECCLES, R. 1997. Pursuing Value: Reporting Gaps in the United Kingdom. *Price Waterhouse*.
COLLER, M. & YOHN, T. 1997. Management forecasts and information asymmetry: An examination of bid-ask spreads. *Journal of Accounting Research,* (Fall).
COLLETT, P. & HRASKY, S. 2005. Voluntary Disclosure of Corporate Governance Practices by Listed Australian Companies. *Corporate Governance: An International Review,* 13**,** 188-196.
COLLINS, D., MAYDEW, E. & WEISS, I. 1997. Changes in the Value-Relevance of Earnings and Book Values over the past forty years. *Journal of Accounting and Economics,* December**,** 39-67.
CONGER, J., FINEGOLD, D. & LAWLER III, E. 1998a. Appraising Boardroom Performance. *Harvard Business Review,* 76**,** 136-148.
CONGER, J. A., FINEGOLD, D. & LAWLER III, E. E. 1998b. Appraising Boardroom Performance. *Harvard Business Review,* 76**,** 136-148.
COOK, R. D. 1977. Detection of Inuential Observation in Linear Regression. *Tech-nometrics* 19**,** 15-18.
COOK, R. D. & WEISBERG, S. 1980. Characterizations of an Empirical Influence Function for Detecting Influential Cases in Regression. *Technometrics,* 22**,** 495-508.
COOK, R. D. & WEISBERG, S. 1982. *Residuals and Influence in Regression,* New York, Chapman and Hall.
COOKE, T. E. 1989a. *An empirical Study of Financial Disclosure by Swedish Companies.* Ph.D, University of Exeter.
COOKE, T. E. 1989b. Voluntary corporate disclosure by Swedish companies. *Journal of International Financial Management and Accounting,* 1**,** 171-195.

COOKE, T. E. 1989a. Disclosure in the Corporate Annual Reports of Swedish Companies. *Accounting and business research,* 19**,** 113-124.
COOKE, T. E. 1991. An Assessment of Voluntary Disclosure In Annual Reports of Japanese Corporations. *International Journal of Accounting,* 26**,** 174-189.
COOKE, T. E. 1992. The Impact of Size, Stock Market Listing and Industry Type on Disclosure in the Annual Reports of Japanese Listed Companies,. *Accounting and Business Research,* 22**,** 229-237.
COOKE, T. E. 1998. Regression Analysis in Accounting Disclosure Studies. *Accounting and business research,* 28**,** 209-224.
COPELAND, R. M. & FREDERICKS, W. 1968. Extent of Disclosure. *Journal of Accounting Research,* 6**,** 106-113.
CORMIER, D., AERTS, W., LEDOUX, M.-J. & MAGNAN, M. 2009. Attributes of Social and Human Capital Disclosure and Information Asymmetry Between Managers and Investors. *Canadian Journal of Administrative Sciences / Revue Canadienne des Sciences de l'Administration,* 26**,** 71-88.
CORMIER, D. & GORDON, I. M. 2001. An Examination of Social and Environmental Reporting Strategies. *Accounting, Auditing and Accountability Journal,* 14**,** 587-616.
CORMIER, D., LEDOUX, M.-J. E., MAGNAN, M. & AERTS, W. 2010. Corporate governance and information asymmetry between managers and investors. *Corporate Governance (Emerald Group Publishing),* 10**,** 574.
CORMIER, D., LEDOUX, M. J. & MAGNAN, M. 2011. The Informational Contribution of Social and Environmental Disclosures. *Management Decision,* 49.
CORMIER, D. & MAGNAN, M. 1999. Corporate Environmental Disclosure Strategies: Determinants, Costs and Benefits. *Journal of Accounting, Auditing and Finance,* 14**,** 429-451.
CORMIER, D., MAGNAN, M. & VAN VELTHOVEN, B. 2005. Environmental Disclosure Quality in Large German Companies: Economic Incentives, Public Pressures or Institutional Conditions? *European Accounting Review,* 14**,** 3-39.
COTTER, J., SHIVDASANI, A. & ZENNER, M. 1997. Do Independent Directors Enhance Target Shareholder Wealth during Tender Offers? *Journal of Financial Economics,* 43**,** 195-218.
CRAIG, R. & DIGA, J. 1998. Corporate Accounting Disclosure in ASEAN. *Journal of International Financial Management and Accounting,* 9**,** 246-274.
CRAMER, E. M. 1972. Significance tests and tests of models in multiple regression. *The American Statistician,* 26**,** 26-30.
CRASWELL, A. T. & TAYLOR, S. L. 1992. Discretionary Disclosure of Reserve by Oil and Gas Companies. *Journal of Business Finance & Accounting,* 19**,** 295-308.
CREADY, W. M. & MYNATT, P. G. 1991. The Information Content of Annual Reports: A Price and Trading Response Analysis. *The Accounting Review,* 66**,** 291-312.
CRONBACH, L. J. 1951. Coefficient Alpha and the Internal Structure of Tests. *Psychometrica,* 16**,** 297-334.
CUNNINGHAM, S. W. 1973. The predictability of British Stock markets prices. *Applied Statistics,* 22**,** 315-331.
DA SILVA MONTEIRO, S. M. & AIBAR-GUZMÁN, B. 2010. Determinants of Environmental Disclosure in the Annual Reports of Large Companies Operating in Portugal. *Corporate Social Responsibility and Environmental Management,* 17**,** 185-204.
DAL-RI MURCIA, F. & DOS SANTOS, A. 2012. Discretionary-Based Disclosure: Evidence from the Brazilian Market. *Brazilian Administration Review (BAR),* 9**,** 88-109.
DALZIEL, T., WHITE, R. E. & ARTHURS, J. D. 2011. Principal Costs in Initial Public Offerings. *Journal of Management Studies*.

DARDOR, Z. O. 2009. Publishing delay and the usefulness of annual reports in Libya. *Unpublished Doctoral Dissertation, Bournemouth University, United Kingdom.*
DAVEY, H. B. 1982. Corporate Social Responsibility Disclosure in New Zealand: An Empirical Investigation. *Unpublished Working Paper Massey University, Palmerton North*.
DAVIDSON, D. & SUPPES, P. 1957. *Decision Making: An Experimental Approach,* Stanford, USA.
DAVIDSON, M. L. & SHARMA, A. R. 1988. Parametric Statistics and Levels of Measurement. *Psychological Bulletin,* 104**,** 137-144.
DAVIDSON, W. N., XIE, B. & XU, W. 2004. Market Reaction to Voluntary Announcements of Audit Committee Appointments: The Effect of Financial Expertise. *Journal of Accounting and Public Policy,*

23**,** 279-291.
DAY, J. 1986a. The Use of Annual Reports by UK Investment Analysts. *Accounting and Business Research,* 16**,** 295-307.
DAY, J. F. S. 1986b. The Use of Annual Reports by UK Investment Analysts. *Accountinf and business Research,* 16**,** 295-307.
DE VAUS, D. A. 2002. *Analyzing Social Science Data,* London, Sage Publications.
DEAKIN, S. & SINGH, A. 2008. The Stock market, the market for corporate control and the theory of the firm: Legal and economic perspectives and implications for public policy. Working Papers wp365.
DEBORAH, B. & PATRICIA, E. 2012. Intellectual Capital Disclosure Commitment: Myth or Reality? *Journal of Intellectual Capital,* 13**,** 39-56.
DECKER, W. E., HERZ, R. H. & KEEGAN, E. M. 2002. *Building Public Trust: The Future of Corporate Reporting,* New York, John Wiley & Sons.
DEFOND, M. L., HANN, R. N. & HU, X. 2005. Does the Market Value Financial Expertise on Audit Committees of Boards of Directors? . *Journal of Accounting Research,* 43**,** 153-193.
DELOITTE 2006. Write to Reason: Surveying OFRSs and Narrative Reporting in Annual Reports. *Deloitte, London.* .
DELOITTE 2005. Hold the Front Pages - Surveying OFRs and Narrative Reporting in Annual Reports. *Deloitte, London*.
DELOITTE 2006a. Holding the Front Pages: Surveying OFRS and Narrative Reporting in Annual Reports. London.
DELOITTE 2006b. Write to Reason: Surveying OFRS and Narrative Reporting in Annual Reports. London: Deloitte.
DEMB, A. & NEUBAUER, F. F. 1992. The Corporate Board: Confronting The Paradoxes. *Long Range Planning,* 25**,** 9-20.
DEMSETZ, H. 1970. The private production of public goods. *Journal of Law and Economics,* October**,** 293-306.
DEPOERS, F. 2000. A Cost Benefit Study of Voluntary Disclosure: Some Empirical Evidence from French Listed Companies. *The European Accounting Review,* 9**,** 245-263.
DEZOORT, F. T. 1997. An Investigation of Audit Committees' Oversight Responsibilities. *Abacus,* 33**,** 208-227.
DIAMOND, D. & VERRECCHIA, R. 1991. Disclosure, Liquidity, and the Cost of Capital. *Journal of Finance,* 46**,** 1325-1359.
DIAMOND, D. W. 1985. Optimal Release of Information By Firms. *The Journal of finance,* 40**,** 1071-1094.
DICKENS, R. N. & SHELOR, R. M. 2003. Pros win! Pros win!… or do they?: an analysis of the 'Dartboard' contest using stochastic dominance. *Applied Financial Economics,* 13**,** 573 - 579.

DOMÍNGUEZ, M. A. A. 2012. Company Characteristics and Human Resource Disclosure in Spain. *Social Responsibility Journal,* 8**,** 4.
DONALDSON, L. 1985. *In Defence of Organisation Theory, A Reply to Critics,* Cambridge, Cambridge University Press.
DONNELLY, R. & MULCAHY, M. 2008. Board Structure, Ownership, and Voluntary Disclosure in Ireland. *Corporate Governance: An International Review,* 16**,** 416-429.
DRYDEN, M. M. 1970. A statistical study of UK share prices. *Scottish Journal of Political Economy,* 17**,** 369-389.
DUSKA, R. F. & BOWIE, N. E. 1992. *Why Be a Loyal Agent? A Systematic Ethical Analysis in Ethics and Agency Theory: An Introduction.,* Oxford, Oxford University Press.
DYE, R. A. 1985. Disclosure of Nonproprietary Information. *Journal of Accounting Research,* 23**,** 123-145.
ECCLES, R. G., PHILLIPS, D. M. H. & RICHARDS, H. M. 1998. Reporting Gaps in the United Kingdom: The Chief Executive's Perspective. *PriceWaterhouseCoopers, London.*
EISENHARDT, K. 1989. Agency theory: An assessment and Review. *Academy of Management Review,* 14**,** 57-74.
ELLIOTT, R. K. & JACOBSON, P. D. 1994a. Costs and benefits of business information disclosure. *Accounting Horizons,* 8**,** 80-96.
ELLIOTT, R. K. & JACOBSON, P. D. 1994b. Costs and Benefits of Business Information Disclosure. *Accounting Horizons,* 8**,** 80 - 96.
ELZAHAR, H. & HUSSAINEY, K. 2012. Determinants of Narrative Risk Disclosures in UK Interim Reports. *Journal of Risk Finance,* 13**,** 133-147.
ENG, L. L. & MAK, Y. T. 2003. Corporate Governance and Voluntary Disclosure. *Journal of Accounting and Public Policy,* 22**,** 325-345.
EPSTEIN, M., FLAMHOLTZ, E. & MCDONOUGH, J. J. 1976. Corporate Social Accounting in the United States of America: State of the Arts and Future Prospects. *Accounting, Organisations and Society,* 1**,** 23-42.
ETZIONI, A. 1975. *A Comparative Analysis of Complex Organisations,* New York, The Free Press.
EU AMD. 2003. Directive 2003/51/EC of the European Parliament and of the Council of 18 June 2003. *Official Journal of the European Union***,** 16-22.
EVANS, J. & WEIR, C. 1995. Decision Processes, Monitoring, Incentives and Large Firm Performance in the UK. *Management Decision,* 33**,** 32-38.
EZAT, A. & EL-MASRY, A. 2008. The Impact of Corporate Governance on the Timeliness of Corporate Internet Reporting by Egyptian Listed Companies. *Managerial Finance,* 34**,** 848-867.
FAFBT. 2012. Establishment of the Private Company Council. Norwalk, Connecticut.: Financial Accounting Foundation Board of Trustees.
FAMA, E. & JENSEN, M. 1983. Separation of Ownership and Control. *Journal of Law and Economics,* 26**,** 301-326.
FAMA, E. & MILLER, M. 1972. *The Theory of Finance,* Hinsdale, IL., Dryden Press.
FAMA, E. F. 1970a. Efficient Capital Markets: A Review of the Theory and Empirical Work. *Journal of Finance,* May.
FAMA, E. F. 1970b. Efficient Capital Markets: A Review of Theory and Empirical Work. *The Journal of finance,* 25**,** 383.
FAMA, E. F. 1980. Agency Problems and the Theory of the Firm. *Journal of Political Economy,* 88**,** 288-307.
FAMA, E. F. 1991. Efficient capital markets. *Journal of Finance,* XLV**,** 1575-1617.
FAMA, E. F. 1998. Market efficiency, long-term returns, and behavioral finance. *Financial Economics,* 49**,** 283-306.

FAMA, E. F., FISHER, L., JENSEN, M. C. & ROLL, R. 1969. The Adjustment of Stock Prices to New Information. *International Economic Review,* 1**,** 1-21.
FELO, A. J. 2009. Voluntary Disclosure Transparency, Board Independence and Expertise, and CEO Duality. *Available at SSRN: http://ssrn.com/abstract=1373942*.
FIELD, A. 2000. *Discovering Statistics Using SPSS for Windows,* London, Sage Publications.
FIELD, A. 2009. *Discovering Statistics Using SPSS,* London, Sage Publications Limited.
FIRTH, M. 1976. *Share Prices and Mergers,* London, Saxon House.
FIRTH, M. 1978. A Study of the Consensus of the Perceived Importance of Disclosure of Individual Items in Corporate Annual Reports. *The International Journal of Accounting,* Fall, 14**,** 57-70.
FIRTH, M. 1979. The Impact of Size, Stock Market Listing, and Auditors on Voluntary Disclosure in Corporate Annual Reports. *Accounting and Business Research,* 9**,** 273-280.
FIRTH, M. 1980. Raising Finance and Firms' Corporate Reporting Policies. *Abacus,* 16**,** 100-115.
FIRTH, M., VOL. 19, P. 521-529. 1981. The Relative Information Content of the Release of Financial Results Data by Firms. *Journal of Accounting Research,* 19**,** 521-529.
FISCHER, M., GORDON, T. P. & KRAUT, M. A. 2010. Meeting user Information Needs: The Impact of Major Changes in FASB and GASB Standards on Financial Reporting by Colleges and Universities. *Journal of Accounting and Public Policy,* 29**,** 374-399.
FLEISS, J. L. 1971. Measuring nominal scale agreement among many raters. *Psychological Bulletin,* 76**,** 378 - 382.
FORKER, J. J. 1992. Corporate Governance and Disclosure Quality. *Accounting and Business Research,* 22**,** 111-124.
FOSTER, G. 1978. *Financial Statement Analysis,* New Jersey, Prentice Hall.
FOSTER, G. 1986. *Financial Statement Analysis,* Englewood Cliffs, N. J., Prentice Hall.
FRANKS, J. R., BROYLES, J. E. & HECHT, M. J. 1977. An Industry Study of the Profitability of Mergers in the United Kingdom. *Journal of Finance,* 32**,** 1513-1525.
FRC 2008. The Combined Code on Corporate Governance. *Financial Reporting Council,* June.
FREEDMAN, M. & WASLEY, C. 1990. The Association Between Environmental Performance and Environmental Disclosure in Annual Reports and 10Ks. Advances in Public Interest Accounting. *A Research Annual,* 3**,** 183-193.
FREEMAN, E. R. 1984. *Strategic Management: A stakeholder Approach,* Boston, Pitman.
FREY, B. S. 1993. Does Monitoring Increase Work Effort? The Rivalry with Trust and Loyalty. *Economic Inquiry,* 21**,** 663-670.
GAITO, J. 1980. Measurement of Scales and Statistics: Resurgence of an Old Misconception. *Psychological Bulletin,* 87**,** 564-567.
GAJEWSKI, J. F. 1999. Earnings announcements, asymmetric information, trades and quotes. *European Financial Management,* 5**,** 411-423.
GAJEWSKI, J. F. & QUERE, B. 2001. The information content of earnings and turnover announcements in France. *European Accounting Review,* 10**,** 679-704.
GAMERSCHLAG, R., MÖLLER, K. & VERBEETEN, F. 2011. Determinants of Voluntary CSR Disclosure: Empirical Evidence from Germany. *Review of Managerial Science,* 5**,** 233-262.
GARCIA-BENAU, M. & MONTERREY-MAYORAL, J. 1992. Voluntary Financial Disclosure by Listed Spanish Companies: Extent and Corporate Characteristics. *15th EAA congress.* Madrid.
GARCÍA-MECA, E. & MARTÍNEZ, I. 2005. Assessing the Quality of Disclosure on Intangibles in the Spanish Capital Market. *European Business Review,* 17**,** 305-313.

GARCÍA-MECA, E., PARRA, I., LÁRRAN, M. & MARTÍNEZ, I. 2005. The explanatory factors of intellectual capital disclosure to financial analysts. *European Accounting Review,* 14**,** 63-94.
GARCÍA-MECA, E. & SÁNCHEZ-BALLESTA, J. P. 2010. The Association of Board Independence and Ownership Concentration with Voluntary Disclosure: A Meta-analysis. *European Accounting Review,* 19**,** 603-627.
GELB, D., HOLTZMANN, M. & MEST, D. 2008. International Operations and Voluntary Disclosures by US-based Multinational Corporations. *Adv Account,* 24**,** 243-249.
GEORGES, D. & THOURAYA, T. 2005. Risk Management and Corporate Governance: The Importance of Independence and Financial Knowledge for the Board and the Audit Committee. Available: http://ssrn.com/abstract=686470 or http://dx.doi.org/10.2139/ssrn.686470 [Accessed 27/04/2012].
GEORGIOU, G. 2005. Investigating Corporate Management Lobbying in the U.K. Accounting Standard-setting Process: A Multi-issue/multi-period Approach. *Abacus,* 41**,** 323-347.
GIBBINS, M., RICHARDSON, A. J. & WATERHOUSE, J. 1992. The Management of Financial Disclosure: Theory and Perspectives, Research Monograph No. 20. *The Canadian Certified Accountants' Research Foundation*.
GIBSON, S. K. 2004. Mentoring in Business and Industry: The Need for a Phenomenological Perspective. *Mentoring & Tutoring: Partnership in Learning,* 12**,** 259-275.
GNIEWOSZ, G. 1990. The Share Investment Decision Process and Information Use: An Exploratory Case Study. *Account and Business Research,* 20**,** 223-230.
GOLDRATT, E. M. 1988. Computerized shop floor scheduling. *International Journal of Production Research,* 26**,** 443-455.
GOLDRATT, E. M. 1990. *What is this thing called Theory of Constraints and how should it be implemented?,* New York, North Press Inc.
GONEDES, N. J. 1975. Information-production and capital market equilibrium. *Journal of Finance,* June**,** 841-864.
GONEDES, N. J. 1976. The capital market, the market for information, and external accounting. *The Journal of Finance,* 31**,** 611-630.
GONEDES, N. J. & DOPUCH, N. 1974. Capital market equilibrium, information production, and selecting accounting techniques: Theoretical framework and review of empirical work. *Journal of Accounting Research,* 12 (Studies on Financial Accounting Objectives)**,** 48-129.
GRAHAM, J. R., HARVEY, C. R. & RAJGOPAL, S. 2005. The Economic Implications of Corporate Financial Reporting. *Journal of Accounting and Economics,* 40**,** 3-73.
GRANGER, C. W. J. & MORGENSTERN, O. 1963. SPECTRAL ANALYSIS OF NEW YORK STOCK MARKET PRICES1. *Kyklos,* 16**,** 1-27.
GRAY, R. & HASLAM, J. 1990. External reporting by U K universities: an exploratory study of accounting change. *Financial Accountability and Management,* 6**,** 51-72.
GRAY, R. H., KOUHY, R. & LAVERS, S. 1995a. Corporate Social and Environmental Reporting: A review of the Literature and a Longitudinal Study of UK Disclosure. *Accounting, Auditing and Accountability Journal,* 8**,** 47-77.
GRAY, R. H., KOUHY, R. & LAVERS, S. 1995b. Methodological Themes:Constructing a Database of Social and Environmental Reporting by UK companies. *Accounting, Auditing and Accountability Journal,* 2**,** 78-101.
GRAY, S. J. 1978. Segment Reporting and the EEC Multinationals. *Journal of Accounting Research,* 16**,** 242-253.

GRAY, S. J., MEEK, G. K. & ROBERTS, C. 1995. International Capital Market Pressure and Voluntary Annual Reports Disclosure by US and UK Multinationals. *Journal of International Financial and Managment Accounting,* 6**,** 43-67.
GRAY, S. J. & ROBERTS, C. 1989. *Voluntary disclosure and the British multinationals: International Pressures of Accounting Change,* Hemel, Hempstead, Prentice Hall.
GREEN, D. J. 1964. Towards a theory of interim reports. *Journal of Accounting Research,* 2**,** 35-49.
GREGOIRE, T. G. & DRIVER, B. L. 1987. Analysis of Ordinal Data to Detect Population Differences. *Psychological Bulletin,* 101**,** 159-165.
GUIDRY, R. P. & PATTEN, D. M. 2012. Voluntary Disclosure Theory and Financial Control Variables: An Assessment of Recent Environmental Disclosure Research. *Accounting Forum,* 36**,** 81-90.
GUJARATI, D. N. 1995. *Basic Econometrics,* New York, McGraw-Hill.
GUSTAVSSON, J. P., BERGMAN, H., EDMAN, G., EKSELIUS, L., VON KNORRING, L. & LINDER, J. 2000. Swedish Universities Scales of Personality (SSP): Construction, Internal Consistency and Normative Data. *Acta Psychiatrica Scandinavica,* 102**,** 217-225.
GUTHRIE, J. & MATTHEWS, M. R. 1985. Corporate social accounting in Australia. *In:* E, P. L. (ed.) *Research in corporate social performance and policy.*
GUTHRIE, J. & PETTY, R. 2000. "Are companies thinking smart?". Australian CPA.
GUTHRIE, J., PETTY, R. & RICCERI, F. 2006. The Voluntary Reporting of Intellectual Capital: Comparing Evidence from Hong Kong and Australia. *Journal of Intellectual Capital,* 7**,** 254-271.
GUTHRIE, J. E. & PARKER, L. D. 1990. Corporate Social Disclosure Practice: A Comparative International Analysis. *Advances in Public Interest Accounting,* 3**,** 159-176.
HAGERMAN, R. L. & ZMIJEWSKI, M. E. 1979. Some Economic Determinants of Accounting Policy Choice. *Journal of Accounting and Economics,* 1**,** 141-161.
HANIFFA, R. & HUDAIB, M. 2006. Corporate Governance Structure and Performance of Malaysian Listed Companies. *Journal of Business Finance & Accounting,* 33**,** 1034-1062.
HANIFFA, R. M. & COOKE, T. E. 2002. Culture, Corporate Governance and Disclosure in Malaysian Corporations. *Abacus,* 38**,** 317-349.
HARDWICK, P. & LETZA, S. 1999. The Relative Performance of Mutual and Proprietary Life Insurance Companies in the UK: An Exploratory Study. *Bournemouth University Working Paper Series,* 18.
HASSAN, A. & IBRAHIM, E. 2012. Corporate Environmental Information Disclosure: Factors Influencing Companies' Success in Attaining Environmental Awards : Corporate Environmental Disclosure and Environmental Awards. *Corporate Social Responsibility and Environmental Management,* 19**,** 32.
HASSAN, O. A. G., GIORGIONI, G., ROMILLY, P. & POWER, D. M. 2011a. Voluntary Disclosure and Risk in an Emerging Market. *Journal of Accounting in Emerging Economies,* 1**,** 33-52.
HASSAN, O. A. G., GIORGIONI, G., ROMILLY, P. & POWER, D. M. 2011b. Voluntary Disclosure and Risk in an Emerging Market. *Journal of Accounting in Emerging Economies,* 1**,** 33-52.
HAYES, A. F. & KRIPPENDORFF, K. 2007. Answering the call for a standard reliability measure for coding data. *Communication Methods and Measures,* 1**,** 77 - 89.
HAYN, C. 1995. The Information Content of Losses. *Journal of Accounting and Economics,* 20**,** 125-153.

HE, L., LABELLE, R., PIOT, C. & THORNTON, D. B. 2008. Board monitoring, audit committee effectiveness, and financial reporting quality: Review and synthesis of empirical evidence. *Journal of Forensic Accounting, à paraître*.

HEALY, M. P. & PALEPU, K. G. 2001. Information Asymmetry, Corporate Disclosure and the Capital Markets: A Review of the Empirical Disclosure Literature. *Journal of Accounting and Economics*, 405-440.

HEALY, P., HUTTON, A. & PALEPU, K. 1999. Stock performance and intermediation changes surrounding sustained increases in disclosure. *Contemporary Accounting Research,* 16, 485-520.

HEALY, P. M. & PALEPU, K. G. 1993. The Effect of Firms' Financial Disclosure Policies on Stock Prices. *Accounting Horizons,* 7.

HEALY, P. M. & PALEPU, K. G. 1995. The Challenges of Investor Communication The Case of CUC International, Inc. *Journal of Financial Economics,* 38, 111-140.

HERZBERG, F., MAUSNER, B. & SYNYDERMAN, B. 1959. *The Motivation to Work,* New York, Willey.

HIDALGO, R., GARCÍA-MECA, E. & MARTÍNEZ, I. 2011. Corporate Governance and Intellectual Capital Disclosure. *Journal of Business Ethics,* 100, 483-495.

HINDLEY, B. 1970. Separation of Ownership and Control in the Modern Corporation. *The Journal of Law and Economic,* 13, 185-222.

HO, L. & TAYLOR, L. E. 2007. An Empirical Analysis of Triple Bottom-line Reporting and its Determinants: Evidence from the United States and Japan. *Journal of International Financial Management and Accounting,* 18, 123-150.

HO, S. M. S. & WONG, K. R. 2001a. A study of the relationship between corporate governance structures and the extent of voluntary disclosure. *Journal of International Accounting, Auditing & Taxation,* 10, 139-156.

HO, S. S. M. & WONG, K. S. 2001b. A Study of Corporate Disclosure Practice and Effectiveness in Hong Kong. *Journal of International Financial Management and Accounting,* 12, 75-102.

HO, S. S. M. & WONG, K. S. 2001c. A Study of the Relationship between Corporate Governance Structures and the Extent of Voluntary Disclosure. *Journal of International Accounting, Auditing and Taxation,* 10, 139-156.

HOARAU, C. 1995. International Accounting Harmonization: American Hegemony or Mutual Recognition with Benchmarks? *European Accounting Review,* 4, 217-233.

HOLLAND, J. 1997. Corporate Communications with Institutional Shareholders: Private Disclosures and Financial Reporting. *Institute of Chartered Accountants of Scotland, Edinburgh*.

HOLLAND, J. 1998. Private disclosure and financial reporting. *Accounting and Business Research,* 28, 255-269.

HOLSTI, O. R. 1969. *Content Analysis for the Social Sciences and Humanities,* Reading, MA, Addison-Wesley.

HOLTHAUSEN, R. W. 1981. Evidence on the Effects of Bond Covenants and Management Compensation Contracts on the Choice of Accounting Techniques: The Case of Depreciation Switch-Back. *Journal of Accounting and Economics,* 3, 73-109.

HOOKS, J. J., COY, D. & DAVEY, H. 2000. Measuring the extent and quality of disclosure in the annual reports of the reformed N Z electricity retail and distribution companies from an accountability perspective: Preliminary findings. *Palmerston North, N Z: Massey University, School of Accountancy Seminar Series,* 79, 74-76.

HORNGREN, C. T. 1957. Disclosure. *Accounting Review,* 33, 598-604.

HORTON, J. & SERAFEIM, G. 2010. Market Reaction to and Valuation of IFRS Reconciliation Adjustments: First Evidence from the UK. *Review of Accounting Studies,* 15**,** 725-751.
HOSSAIN, M. 2008. The Extent of Disclosure in Annual Reports of Banking Companies: The Case of India. *European Journal of Scientific Research,* 23**,** 659-680.
HOSSAIN, M. & HAMMAMI, H. 2009. Voluntary Disclosure in the Annual Reports of an Emerging Country: The Case of Qatar. *Advances in Accounting,* 25**,** 255-265.
HOSSAIN, M., PERERA, M. H. B. & RAHMAN, A. R. 1995. Voluntary Disclosure in the Annual Reports of New Zealand Companies. *Journal of International Financial Management & Accounting,* 6**,** 69-87.
HOSSAIN, M., TAN, L. M. & ADAMS, M. 1994a. Voluntary disclosure in an emerging capital market: Some empirical evidence from companies listed on the Kuala Lumpur Stock Exchange. *International Journal of Accounting,* 29**,** 334-351.
HOSSAIN, M., TAN, M. L. & ADAMS, M. B. 1994b. Voluntary Disclosure in An Emerging Capital Market: Some Empirical Evidence From Companies Listed On The KLSE. *The International Journal of Accounting and business research,* 29**,** 334-351.
HUDDART, S., HUGHES , J. S. & LEVINE, C. B. 2001. Public disclosure and dissimulation of insider trades. *Econometrica,* 69**,** 665-681.
HUGHES, J. S., JING, L. & LIU, J. 2007. Information Asymmetry, Diversification, and Cost of Capital. *Accounting Review,* 82**,** 705-729.
HUSSEY, R. & WOOLFE, S. 1998. The Auditors Review Report. *Managerial Auditing Journal,* 13**,** 448-454.
I.A.S.B & F.A.S.B 2005. Conceptual Framework: Objectives of Financial Reporting.
I.A.S.C. 1989. Framework for the Preparation and Presentation of Financial Statements. *International Accounting Standards Committee,* London.
I.E. CONSULTING 2008. The Economic Impact of Private Equity in the UK. London: BVCA.
I.F.R.S. 2010. Conceptual Framework for Financial Reporting. Available: http://www.iasplus.com/standard/framewk.htm [Accessed 21.04.2011].
IATRIDIS, G. 2008a. Accounting Disclosure and Firms' Financial Attributes: Evidence from the UK Stock Market. *International Review of Financial Analysis,* 17**,** 219-241.
IATRIDIS, G. 2008b. Accounting Disclosure and Firms' Financial Attributes: Evidence from the UK Stock Market International. *Review of Financial Analysis,* 17**,** 219-241.
IKA, S. R., A., N. & MOHD, G. 2012. Audit Committee Effectiveness and Timeliness of Reporting: Indonesian Evidence. *Managerial Auditing Journal,* 27**,** 403 - 424.
INCHAUSTI, A. G. 1997. The Influence of Company Characteristics and Accounting Regulation on Information Disclosed by Spanish Firms. *European Accounting Review: Full Set - European Accounting Review (The) & Accounting in Europe from 2007,* 6**,** 45-68.
INDRARINI, L. 2007. Corporate Board Governance and Voluntary Disclosure of Executive Compensation Practices. *Available at SSRN: http://ssrn.com/abstract=1103717*.
ISMAIL, K. & IBRAHIM, A. H. 2008. Social and Environmental Disclosure in the Annual Reports of Jordanian Companies. *Issues in Social and Environmental Accounting,* 2**,** 198-210.
IZAN, H. Y. 2006. Factors Influencing Voluntary Corporate Disclosure by Kenyan Companies. *Corporate governance,* 14**,** 107-125.
JAFFE, J. F. 1974. Special information and insider trading. *Journal of Business Finance & Accounting,* 47**,** 410-428.
JEAN-FRANÇOIS, H. & MARC, J. 2008. Environmental Performance Indicators: An Empirical Study of Canadian Manufacturing Firms. *Journal of Environmental Management,* 87**,** 165-176.

JENSEN, M. C. 1993. The Modern Industrial Revolution, Exit, and the Failure of Internal Control Systems. *The Journal of Finance,* 48**,** 831-880.
JENSEN, M. C. & MECKLING, W. H. 1976. Theory of the Firm: Managerial Behaviour, Agency Costs and Ownership Structure. *Journal of Financial Economics,* 3**,** 305-360.
JOHN, K. & SENBET, L. W. 1998. Corporate Governance and Board Effectiveness. *Journal of Banking and Finance,* 22**,** 371-403.
JONES, K. & ALABASTER, T. 1999. Critical analysis of corporate environmental reporting scoring systems. *Journal of Environmental Assessment Policy and Management,* 1**,** 27 - 60.
JOSEPH, C. & TAPLIN, R. 2011. The Measurement of Sustainability Disclosure: Abundance Versus Occurrence. *Accounting Forum,* 35**,** 19-31.
JUDGE, G. G., GRIFFITHS, W. E. & HILL, R. C. 1985. *The theory and practice of econometrics,* New York, John Wiley & Sons.
KANTO, A. J. & SCHADEWITZ, H. J. 2000. Market Use of Disclosure Components in Interim Reports. *The International Journal of Management Science,* 28**,** 417 - 431.
KAYA, D. 2012. The Influence of Firm-Specific Characteristics on the Extent of Voluntary Disclosure in XBRL: Empirical Analysis of SEC Filings. *International Journal of Accounting and Information Management*.
KELLY, L. 1983. The Development of a Positive Theory of Corporate Management's Role in External Financing Reporting. *Journal of Accounting Literature,* Spring**,** 111-50.
KELTON, A. S. & YANG, Y.-W. 2008. The impact of corporate governance on Internet financial reporting. *Journal of Accounting and Public Policy,* 27**,** 62-87.
KENDALL, M. G. 1953. The Analysis off Economics Time Series, Part 1 - Prices. *Journal of the Royal Statistical Society. Series A (Statistics in Society),* CXVI**,** 11-25.
KENNEDY, P. 1985. *A Guide to Econometrics,* Ocford, Basil Blackwell Ltd.
KENT, P. & STEWART, J. 2008. Corporate governance and disclosures on the transition to International Financial Reporting Standards. *Accounting and Finance Association of Australia and New Zealand,* 48**,** 649-671.
KHALED, M. D., FATHY, S. N. & HASSANEEN, I. T. 2010. Investigating the Relationship between Firm Characteristics and Mandatory Disclosure Level within the Egyptian Environment. Available: http://ssrn.com/abstract=1871105 [Accessed 27/04/2012].
KHANCHEL, I. 2007. Corporate Governance: Measurement And Determinant Analysis. *Managerial Auditing Journal,* 22**,** 740-760.
KIRKPATRICK, G. 2009. The corporate governance lessons from the financial crisis. *Paris: Organisation for Economic Co-operation and Development,* 2009/1.
KLEIN, A. 2002. Audit Committee, Board of Director Characteristics and Earnings Management. *Journal of Accounting and Economics,* 33**,** 375-400.
KOLBE, R. H. & BURNETT, M. S. 1991. Content-Analysis Research: An Examination of Applications with Directives for Improving Research Reliability and Objectivity. *Journal of Consumer Research,* 18**,** 243-250.
KOLK, A. & PINKSE, J. 2010. The integration of corporate governance in corporate social responsibility disclosures. *Corporate Social - Responsibility and Environmental Management,* 17**,** n/a.
KOSNIK, R. D. 1990. Effects of board demography and directors' incentives on corporate green mail decisions. *Academy of Management Journal,* 33**,** 129-150.
KOUTSOYIANNIS, A. 1972. *Theory Econometrics: An Introduction Exposition of Econometrics Methods,* New York, MacMillan.
KREMELBERG, D. 2011. *Practical Statistics: A Quick and Easy Guide to IBM, SPSS, STATA,* London, Sage Publications.

KRIPPENDORF, K. 1980. *Content Analysis: An Introduction to its Methodology,* Beverly Hills, Sage Publications.
KRIPPENDORFF, K. 2004a. *Content Analysis, An Introduction to Its Methodology,* Thousand Oaks, CA, Sage Publications.
KRIPPENDORFF, K. 2004b. *Content Analysis: An Introduction to its Methodology,* CA, Sage Publications.
KRISHNAN, G. V. & VISVANATHAN, G. 2007. Reporting Internal Control Deficiencies in the Post-Sarbanes - Oxley Era: The Role of Auditors and Corporate Governance. *The International Journal of Auditing,* 11**,** 73-90.
KUN, W., O, S. & CLAIBORNE, M. C. 2008. Determinants and Consequences of Voluntary Disclosure in an Emerging Market: Evidence from China. *Journal of International Accounting, Auditing and Taxation,* 17**,** 14-30.
KYEYUNE, M. F. 2010. *The Relative Information Content of Complementary and Supplementary Narrative Commentary in UK Interim Reports.* PhD, Bournemouth Universrity.
LAKSMANA, I. 2008a. Corporate Board Governance and Voluntary Disclosure of Executive Compensation Practices. *Contemporary Accounting Research,* 25**,** 1147-1182.
LAKSMANA, I. 2008b. Corporate Board Governance and Voluntary Disclosure of Executive Compensation Practices. *Contemporary Accounting Research,* 25.
LAMBERT, R., LEUZ, C. & VERRECCHIA, R. E. 2007. Accounting Information, Disclosure, and the Cost of Capital. *Journal of Accounting Research,* 45**,** 385-420.
LAMBERT, R. A. & LARKER, D. F. 1985. Golden Parachutes, Executive Decision-Making and Shareholder Wealth. *Journal of Accounting and Economics,* April**,** 179-203.
LAMBERT, R. A., LEUZ, C. & VERRECCHIA, R. E. 2012. Information Asymmetry, Information Precision, and the Cost of Capital. *Review of Finance,* 16**,** 1-29.
LANG, M. H. & LUNDHOLM, R. J. 1993. Cross-Sectional Determinants of Analyst Ratings of Corporate Disclosures. *Journal of Accounting Research,* 31**,** 246-271.
LAPLUME, A. O., KARAN, S. & LITZ, R. A. 2008. Stakeholder Theory: Reviewing a Theory That Moves Us. *Journal of Management,* 34**,** 1152-1189.
LAWRENCE, A. J. 1995. Deletion Influence and Masking in Regression. *Journal of the Royal Statistical Society. Series B (Methodological),* 57**,** 181-189.
LEE, C. I., ROSENSTEIN, S., RANGAN, N. & DAVIDSON, W. N. 1992. Board Composition and Shareholder Wealth: The Case of Management Buyouts *Financial Management: Leverage Buyouts Special Issue,* 21**,** 58-72.
LEE, T. A. & TWEEDIE, D. P. 1975. Accounting Information: An Investigation of Private Shareholder Usage. *Accounting and Business Research,* 5**,** 280-291.
LEE, T. A. & TWEEDIE, D. P. 1977. The Private Shareholder and the Corporate Report. *Institute of Chartered Accountants in England and Wales, London.*
LEE, T. A. & TWEEDIE, D. P. 1981. The Institutional Investor and Financial Information. *The Research Committee of The Institute of Chartered Accountants in England and Wales, London.*
LEFTWICH, R. W., WATTS, R. L. & ZIMMERMAN, J. L. 1981. Voluntary Corporate Disclosure: The Case of Interim Reporting. *Journal of Accounting Research,* 19**,** 50-77.
LENNOX, C. S. 1999. The accuracy and incremental information content of audit reports in predicting bankruptcy. *Journal of Business and Accounting,* 26**,** 757-778.
LETZA, S., KIRKBRIDE, J., SUN, X. & SMALLMAN, C. 2008. Corporate Governance Theorising: Limits, Critics and Alternatives. *International Journal of Law and Management,* 50**,** 17-32.
LETZA, S. & SUN, X. 2002. Corporate Governance: Paradigms, Dilemmas and Beyond. *Poznan University Economic Review,* 2**,** 43-59.

LETZA, S., SUN, X. & KIRKBRIDE, J. 2004. Shareholding Versus Stakeholding: A Critical Review of Corporate Governance. *Corporate Governance: An International Review,* 12**,** 242-262.
LI, J., MANGENA, M. & PIKE, R. 2012. The Effect of Audit Committee Characteristics on Intellectual Capital Disclosure. *The British Accounting Review*.
LI, J., PIKE, R. & HANIFFA, R. 2008a. Intellectual Capital Disclosure and Corporate Governance Structure in UK Firms. *Accounting and Business Research,* 38**,** 137-159.
LI, J., PIKE, R. & HANIFFA, R. 2008b. Intellectual Capital Disclosure and Corporate Governance Structure in UK Firms. *Accounting and Business Research,* 38**,** 137 - 159.
LI, N., TOPPINEN, A., TUPPURA, A., PUUMALAINEN, K. & HUJALA, M. 2011. Determinants of Sustainability Disclosure in the Global Forest Industry. *Electronic Journal of Business Ethics and Organization Studies,* 16.
LI, S. 2010. Does Mandatory Adoption of International Financial Reporting Standards in the European Union Reduce the Cost of Equity Capital? *The Accounting Review,* 85.
LIPTON, M. & LORSCH, J. 1992. A Modest Proposal for Improved Corporate Governance. *Business Lawyer,* 48**,** 59-77.
LIU, X. & ANBUMOZHI, V. 2009. Determinant Factors of Corporate Environmental Information Disclosure: An empirical Study of Chinese Listed Companies. *Journal of Cleaner Production,* 17**,** 593-600.
LOMBARD, M., SNYDER-DUCH, J. & BRACKEN, C. C. 2002a. Content analyses in communication: Assessment and reporting of intercoder reliability. *Human Communication Research,* 28**,** 587 - 604.
LOMBARD, M., SNYDER-DUCH, J. & BRACKEN, C. C. 2002b. Content Analysis in Mass Communication: Assessment and Reporting of Intercoder Reliability. *Human Communication Research,* 28**,** 587-604.
LOPES, P. T. & RODRIGUES, L. L. 2007. Accounting for Financial Instruments: An analysis of the Determinants of Disclosure in the Portuguese Stock Exchange. *The International Journal of Accounting,* 42**,** 25-56.
LOREK, K. S. & WILLINGER, L. G. 1996. A multivariate time-series prediction model for cash-flow data. *The Accounting Review,* 71**,** 81-102.
LORIE, J. & NIEDERHOFFER, V. 1978. Predictive and statistical properties of insider trading. *Journal of Law and Economics,* 11**,** 35-53.
LUNT, M. H. C. 1982. The Role of Interim Accounts and Preliminary Profit Announcements in Financial Reporting in the UK. London: Institute of Chartered Accountants in England and Wales.
LUTFI, R. 1989. Unlisted Securities Market and the Disclosure of Financial Information. Unpublished doctoral dissertation. *University of Glasgow*.
MALKIEL, B. G. 1996. *Guide to Personal InvestingA Random Walk Down Wall Street: Including a Life-Cycle,* New York, Norton.
MALONE, D., FRIES, C. & JONES, T. 1993. An Empirical Investigation of the Extent of Corporate Financial Disclosure in the Oil and Gas Industry. *Journal of Accounting, Auditing and Finance,* 8**,** 249-273.
MANGENA, M. 2004. Exploring the extent and determinants of accounting information disclosures in interim reports. *Unpublished Doctoral Dissertation, University of Luton, United Kingdom.*
MANGENA, M. & PIKE, R. 2004. Shareholding and Audit Committee Members, Audit Committee Size and Expertise and the Quality of Interim Financial Reporting. *Working Paper Series.* Bradford: Bradford University School of Management.

MANGENA, M. & PIKE, R. 2005. Shareholding and Audit Committee Members, Audit Committee Size and Expertise and the Quality of Interim Financial Reporting. *Working Paper Series.* Bradford: Bradford University School of Management.
MANGENA, M. & TAURINGANA, V. 2007a. Disclosure, Corporate Governance and Foreign Share Ownership on the Zimbabwe Stock Exchange. *Journal of International Financial Management and Accounting,* 18**,** 53-85.
MANGENA, M. & TAURINGANA, V. 2007b. Disclosure, corporate governance, foreign share ownership on the Zimbabwe Stock Exchange. *Journal of International Financial Management and Accounting,* 18**,** 53-85.
MARRIS, R. 1964. The Economic Theory of 'Managerial' Capitalism. *Glencoe, III.: Free Press*.
MARSTON, C. L. & SHRIVES, P. J. 1991a. The Use of Disclosure Indices in Accounting Research: A Review Article. *British Accounting Review,* 23**,** 195-210.
MARSTON, C. L. & SHRIVES, P. J. 1991b. The use of disclosure indices in accounting research: A review article. *British Accounting Review,* 23**,** 195-210.
MASON, S. 1971. Information for Investment Decisions: How Efficiently Is It Used? *Investment Analysts,* September**,** 3-16.
MATOUSSI, H. & CHAKROUN, R. 2008. Board Composition, Ownership Structure and Voluntary Disclosure in Annual Reports: Evidence from Tunisia. *Laboratoire Interdisciplinaire de Gestion Universite-Entreprise (LIGUE)*.
MCCLELLAND, D. C. 1961. *The Achieving Society,* Princeton, New Jersey, Van Nostrand.
MCEWEN, R. A. & HUNTON, J. E. 1999. Is Analyst Forecast Accuracy Associated With Accounting Information Use? *Accounting Horizons,* 13**,** 1-16.
MCKINNON, J. & DALIMUNTHE, L. 1993. Voluntary Disclosure of Segment Information by Australian Diversified Companies. *Journal of Accounting and Finance,* 33**,** 33-50.
MCNALLY, G. M., ENG, L. H. & HASSELDINE, C. R. 1982. Corporate Financial Reporting in New Zealand: An Analysis of User Preference, Corporate Characteristics and Disclosure Practices for Discretionary Information. *Accounting and Business Research,* 13**,** 11-20.
MCWILLIAMS, A. & SIEGEL, D. 2001. Corporate Social Responsibility: A Theory of the Firm Perspective. *Academy of Management Review,* 26**,** 117-127.
MEAR, R. & FIRTH, M. 1987. Assessing the Accuracy of Financial Analyst Security Return Predictions. *Accounting, Organizations and Society,* 12**,** 331-340.
MEEK, G. K. & GRAY, S. J. 1989. Globalisation of Stock Markets and Foreign Listing Requirements: Voluntary Disclosure by Continental European Companies Listed on the London Stock Exchange. *Journal of International Business Studies,* 20**,** 315-338.
MEEK, G. K., ROBERTS, C. B. & GRAY, S. J. 1995a. Factors Influencing Voluntary Annual Report Disclosures by U.S., U.K. and Continental European Multinational Corporations. *Journal of International Business Studies,* 26**,** 555-572.
MEEK, G. K., ROBERTS, C. B. & GRAY, S. J. 1995b. Factors influencing voluntary annual report disclosures by US, UK and Continental European mulitinational corporations. *Journal of International Business Studies,* 26**,** 555-572.
MENARD, S. 1995. Applied Logistic Regression Analysis, Sage University Paper Series on Quantitative Applications in the Social Sciences. *Thousand Oaks, CA: Sage.*
MERTON, R. C. 1987. A simple model of capital market equilibrium with incomplete information. *The Journal of Finance,* 42**,** 483-510.
METZGER, M., BOWIE, N. & DEGEORGE, R. T. 1986. Business Law and Regulatory Environment. *Homewood, III.: Richard D.Irwin*.
MILES, J. & SHEVLIN, M. 2004. *Applying Regression and Correlation: A Guide for Students and Researchers,* London, Sage Publications Ltd.

MILLER, D. & SARDAIS, C. 2011. Angel Agents: Agency Theory Reconsidered. *Academy of Management Perspectives,* 25**,** 6.
MILLS, T. C. & JORDANOV, J. V. 2003. The size effect and the random walk hypothesis: Evidence from the London Stock Exchange using Markov chains. *Applied Financial Economics,* 13**,** 807-815.
MILNE, M. J. & ADLER, R. W. 1999a. Exploring the reliability of social and and environmental disclosures content analysis. *Accounting, Auditing & Accountability Journal,* 12**,** 237-256.
MILNE, M. J. & ADLER, R. W. 1999b. Exploring the Reliability of Social and Environmental Disclosures Content Analysis. *Accounting, Auditing & Accountability Journal,* 12**,** 237 - 256.
MOHAMED, A., MONIRUL, A. H., MAHMUD, H. & LEE, Y. 2009. Corporate governance and voluntary disclosure in corporate annual reports of Malaysian listed firms. *Journal of Applied Management Accounting Research*.
MOHD GHAZALI, N. A. & WEETMAN, P. 2006. Perpetuating Traditional Influences: Voluntary Disclosure in Malaysia Following the Economic Crisis. *Journal of International Accounting, Auditing and Taxation,* 15**,** 226-248.
MONSEN, R. J. J. & DOWNS, A. 1965. A Theory of Large Managerial Firms. . *Journal of Political Economy,* 73**,** 221-236.
MOORE, M. L. & BUZBY, S. 1972. The Quality of Corporate Financial Disclosure: A Comment. *Accounting Review,* July**,** 581-586.
MYERS, C. S. & MAJLUF, S. N. 1984. Corporate Financing and Investment Decisions When Firms Have Information That Investors Do Not Have. *Journal of Financial Economics,* 13**,** 187-221.
MYERS, R. 1990. *Classical and modern regression with applications,* Boston, MA: Duxbury.
MYERS, S. C. 1977. Determinants of Corporate Borrowing. *Journal of Financial Economics,* 5**,** 147-175.
NACHMIAS, D. & NACHMIAS, C. 1976. *Research Methods in the Social Sciences,* London, Edward Arnold.
NALIKKA, A. 2008. Corporate Disclosure Practices by Business Firms: A Corporate Cultural Approach. *International Journal of the Academic Business World,* 2**,** 9-20.
NASER, K., AL-KHATIB, K. & KARBHARI, Y. 2002. Emprical Evidence on the Depth of Corporate Information Disclosure in Developing Countries: The Case of Jordan. *International Journal of Commerce and Management,* 12**,** 122-155.
NELSON, J., GALLERY, G. & PERCY, M. 2010. Role Of Corporate Governance In Mitigating The Selective Disclosure Of Executive Stock Option Information. *Accounting and Finance,* 50**,** 685-717.
NETER, J., WASSERMAN, W. & KUTNER, M. H. 1985. *Applied Linear Statistical Models,* Homewood, Illinois, Richard D. Irwin, Inc.
NEUENDORF, K. A. 2002. *The content analysis guidebook,* CA, Sage.
NEUENDORF, K. A. 2011. *The Content Analysis Guidebook,* Thousand Oaks, CA, Sage.
NG, E. J. & KOH, H. C. 1994. An agency theory and probit analytic approach to corporate non-mandatory disclosure compliance. *Asia-Pacific Journal of Accounting***,** 29-44.
NG, L. W. 1985. Social responsibility disclosures of selected New Zealand companies for 1981, 1982, and1983. *Occasional paper No.54. Massey University, Palmerton North*.
NIELSEN, C. 2004. Through the eyes of analysts: A content analysis of annual report narratives. *Working paper*.
NOBES, C. W. 1984. *International Classification of Financial Reporting,* Beckenban, Croom Helm.

NOETHER, G. E. 1991. *Introduction to Statistics: The Non-Parametric Way,* New York, Springer Verlag.
NORUSIS, M. J. 2005. *SPSS 14.0; Statistical Procedures Companion,* London, FT Prentice Hall.
NTIM, C. G., OPONG, K. K., DANBOLT, J. & THOMAS, D. A. 2011. Voluntary Corporate Governance Disclosures by Post-Apartheid South African Corporations. *Journal of Applied Accounting Research*.
NURUNNABI, M. & HOSSAIN, M. A. 2012. The Voluntary Disclosure of Internet Financial Reporting (IFR) in an Emerging Economy: A Case of Digital Bangladesh. *Journal of Asia Business Studies,* 6**,** 17.
NURUNNABI, M., KARIM, A. K. M. W. & NORTON, S. 2011. The Perceived Need for and Impediments to Achieving Accounting Transparency in Developing Countries: A Field Investigation on Bangladesh. *International Journal of Managerial and Financial Accounting,* 3**,** 32-54.
OKCABOL, F. & TINKER, T. 1993. Dismantling Financial Disclosure Regulations: Testing the Stigler-Benston Hypothesis. *Accounting, Auditing and Accountability Journal,* 6**,** 10-38.
OKIKE, E. N. M. 1998. Voluntary Disclosures in Corporate Audit Reports: A Nigerian Case Study (1978–1989). *International Journal of Auditing,* 2**,** 139-166.
OKIKE, E. N. M. 2007. Corporate Governance in Nigeria: The Status Quo. *Corporate Governance: An International Review,* 15**,** 173-193.
OLIVEIRA, L., RODRIGUES, L. & CRAIG, R. 2006. Firm-specific determinants of intangibles reporting: evidence from the Portuguese stock market. *Journal of Human Resource Costing & Accounting,* 10**,** 11-33.
OPONG, K. K., MULHOLLAND, G., FOX, A. F. & FARAHMAND, K. 1999. The behaviour of some UK equity indices: An application of Hurst and BDS tests. *Journal of Empirical Finance,* 6**,** 267-282.
ORENS, R., AERTS, W. & LYBAERT, N. 2009. Intellectual Capital Disclosure, Cost of Finance and Firm Value. *Management Decision,* 47**,** 1536-1554.
OWUSU-ANSAH, S. 1998a. "The Adequacy of Corporate Mandatory Disclosure Practices on Emerging Markets: A Case Study of the Zimbabwe Stock Exchange". *Unpublished Ph.D. Thesis, Middlesex University, England*.
OWUSU-ANSAH, S. 1998b. The Impact of Corporate Attributes on the Extent of Mandatory Disclosure and Reporting by Listed Companies in Zimbabwe. *The International Journal of Accounting,* 33**,** 605-631.
OWUSU-ANSAH, S. 2000. Timeliness of Corporate Financial Reporting in Emerging Capital Markets: Empirical Evidence from the Zimbabwe Stock Exchange. *Accounting and Business Research,* 30**,** 241-254.
P.W.C. 2007. Guide to Key Performance Indicators: Communicating the measures that matter. PriceWaterCoopers.
PALLANT, J. 2001. *SPSS Survival Manual: A step by step guide to data analysis using SPSS for Windows (Versions 10 and 11),* Buckingham, McGraw-Hill.
PARKER, R. H. 1992. *MacMillan Dictionary of Accounting,* London, Macmillan.
PARKINSON, J. E. 1993. *Corporate power and responsibility - issues in the theory of law,* Oxford, Oxford University Press.
PATELLI, L. & PRENCIPE, A. 2007. The relationship between voluntary disclosure and independent directors in the presence of a dominant shareholder. *European Accounting Review,* 16**,** 5-33.
PERNILLA, B., TORBJÖRN, T. & SVEN-OLOF, C. 2010. What Explains Variation in Voluntary Disclosure? A study of the Annual Reports of Corporations Listed on the Stockholm Stock Exchange. *Journal of Management and Governance,* 14**,** 351-377.

PERSONS, O. S. 2006. Corporate Governance And Non-Financial Reporting Fraud. *Journal of Business and Economic Studies,* 12**,** 27-39.
PETTIGREW, A. & MCNULTY, T. 1995. Power and influence in and around the boardroom. *Human Relations,* 48**,** 845-873.
PETTY, R. & CUGANESAN, S. 2005. Voluntary disclosure of intellectual capital by Hong Kong companies: examining size, industry and growth effects over time. *Australian Accounting Review,* 15**,** 40-50.
PIOTROSKI, J. 2000. Discretionary segment reporting decisions and precision of investor beliefs. *Unpublished working paper, University of Chicago*.
POPE, P. F., MORRIS, R. C. & PEELL, D. A. 1990. Insider trading: Some evidence on market efficiency and directors‟ share dealings in Great Britain. *Journal of Business Finance and Accounting and Business Research,* 17**,** 359-380.
POTTER, W. J. & LEVINE-DONNERSTEIN, D. 1999. Rethinking validity and reliability in content analysis. *Journal of Applied Communication Research,* 27**,** 258 - 284.
POUND, J. 1995. The Promise of the Governed Corporation. *Harvard Business Review,* 73**,** 89-98.
PREVITS, G., BRICKER, R., ROBINSON, T. & YOUNG, S. 1994. A Content Analysis of Sell-Side Financial Analyst Company Reports. *Accounting Horizons,* 8**,** 55-70.
PWC 2006. Guide to Key Performance Indicators. *PriceWaterhouseCoopers, London.*
QI, Y., TAPLIN, R. & BROWN, A. M. 2012. Natural Environment Disclosures in the Annual Reports of Chinese Listed Entities. *Journal of Asian and African Studies*.
QU, W. 2011. *A Study of Voluntary Disclosure by Listed Firms in China.* Doctor of Philosophy, Deakin University.
RAFFOURNIER, B. 1995. The Determinants of Voluntary Financial Disclosure by Swiss Listed Companies. *The European Accounting Review,* 4**,** 261-280.
RAHMAN, S. 1998. Theory of constraints: A review of the philosophy and its applications. *International Journal of Operations & Production Management,* 18**,** 336 - 355.
REES, L. 2012. What are the Needs of Private Company Financial Statement Users? Available: http://www.fasri.net/index.php/2012/05/what-are-the-needs-of-private-company-financial-statement-users/ [Accessed 20.06.2012].
REVERTE, C. 2009. Determinants of Corporate Social Responsibility Disclosure Ratings by Spanish Listed Firms. *Journal of Business Ethics,* 88**,** 351-366.
RIFFE, D., LACY, S. & FICO, F. 2005. Analyzing Media Messages: Using Quantitative Content Analysis in Research. *New Jersey: Lawrence Erlbaum Associates*.
RIPPINGTON, F. A. & TAFFLER, R. J. 1995. The information content of firm financial disclosures. *Journal of Business Finance & Accounting,* 22**,** 345-362.
ROBB, S. W. G., SINGLE, L. E. & ZARZESKI, M. T. 2001. Nonfinancial Disclosures Across Anglo-American Countries. *Journal of International Accounting, Auditing and Taxation,* 10**,** 71-83.
ROBERTS, C. & GRAY, S. J. 1988. Information Disclosure by Multinationals: An Emprical Study of the British Response to the U.N. and OECD Recommendations. *In Proceedings of the Sixth International Conference on Accounting Education. London, Greenwood Press***,** 729-739.
ROBERTS, R. 1992. Determinants of Corporate Social Responsibility Disclosure: An Application of Stakeholder Theory Accounting. *Organizations and Society,* 17**,** 595-612.
ROBERTSON, J. 2012. Likert-type Scales, Statistical Methods, and Effect Sizes. *Commun. ACM,* 55**,** 6-7.
ROGERS, R. & GRANT, J. 1997. Content Analysis of Information Cited in Reports of Sell-Side Financial Analysts. *Journal of Financial Statement Analysis,* 3**,** 14-30.

RONEN, J. & LIVNAT, J. 1981. Incentives for segment reporting. *Journal of Accounting Research,* 19**,** 459-481.
ROSENSTEIN, S. & WYATT, J. G. 1990. Outside Directors, Board Independence and Shareholder Wealth. *Journal of Financial Economics,* 26**,** 175-192.
ROSS, S. A. 1977. The Determination of Financial Structure: The Incentive-Signalling Approach. *The Bell Journal of Economics,* 8**,** 23-40.
ROSS, S. A. 1979. Disclosure Regulation in the Financial Markets: Implications of Modern Finance Theory and Signalling Theory. *Issues in Financial Regulation,* McGraw-Hill, New York, NY.
RULAND, W., TUNG, S. & GEORGE, N. E. 1990. Factors Associated with the Disclosure of Managers' Forecasts. *The Accounting Review,* 65**,** 710-721.
RUSSO, A. & PERRINI, F. 2010. Investigating Stakeholder Theory and Social Capital: CSR in Large Firms and SMEs. *Journal of Business Ethics,* 91**,** 207-221.
RUST, R. & COOIL, B. 1994. Reliability Measures for Qualitative Data: Theory and Implications. *Journal of Marketing Research,* 31**,** 1 - 14.
RYAN, B., SCAPENS, R. W. & THEOBALD, M. 2002. *Research Method and Methodology in Finance and Accounting,* 2nd ed. London, Thomson.
SAAD, E., PROKHOROV, D. & WUNSCH, D. 1998. Comparative study of stock trend prediction using time delay, recurrent and probabilistic neural networks. *IEEE Transactions on Neural Networks,* 9**,** 1456-1470.
SAMAHA, K., DAHAWY, K., HUSSAINEY, K. & STAPLETON, P. 2012a. The Extent of Corporate Governance Disclosure and its Determinants in a Developing Market: The Case of Egypt. *Advances in Accounting,* 28**,** 168-178.
SAMAHA, K., DAHAWY, K., HUSSAINEY, K. & STAPLETON, P. 2012b. The extent of corporate governance disclosure and its determinants in a developing market: The case of Egypt. *Advances in Accounting*.
SANCETTA, G. 2008. Relationship between Information Quality and Expected Earning Price Ratio: an Empirical Test. *Synergy,* Sptember-December.
SAUDAGARAN, S. M. & BIDDLE, G. C. 1992. Financial Disclosure Levels and Foreign Stock Exchange Listing Decisions. *Journal of International Financial and Managment Accounting,* 4**,** 105-148.
SCHADEWITZ, H. J., KANTO, A. J. & BLEVINS, D. R. 2002a. An Analysis of the Impact of Varying Levels of Interim Disclosure on Finnish Share Prices within Five days of the Announcement. *American Business Review,* 20**,** 33 - 46.
SCHADEWITZ, H. J., KANTO, A. J. & BLEVINS, D. R. 2002b. An Analysis of the Impact of Varying Levels of Interim Disclosure on Finnish Share Prices Within Five Days of the Announcement. *American Business Review,* 20**,** 33-46.
SCHADEWLITZ, H. J. & BLEVINS, D. R. 1998. Major Determinants of Interim Disclosures in an Emerging Market. *American Business Review* 16**,** 41-55.
SCHERER, F. M. 1980. Industrial Market Structure and Economic Performance. *Rand-McNally***,** 29-41.
SCHIPPER, K. 1981. Discussion of Voluntary Corporate Disclosure: The Case of Interim Reporting. *Journal of Accounting Research,* 19**,** 85-88.
SCHIPPER, K. 1991. Analysts' Forecasts. *Accounting Horizons,* 5**,** 105-121.
SCOTT, W. 1955. Reliability of content analysis: The case of nominal scale coding. *Public Opinion Quarterly,* 17**,** 321-325.
SEDGWICK, P. Parametric v Non-parametric Statistical Tests. *BMJ : British Medical Journal (Clinical Research edition),* 344**,** 1753.
SENGUPTA, P. 1998. Corporate Disclosure Quality and the Cost of Debt. *The Accounting Review* 73**,** 459-474.

SEURING, S., SARKIS, J., MÜLLER, M. & RAO, P. 2008. Sustainability and Supply Chain Management – An Introduction to the Special Issue. *Journal of Cleaner Production,* 16**,** 1545-1551.
SEYHUN, H. N. 1986. Insiders' profits, costs of trading, and market efficiency. *Journal of Financial Economics,* 16.
SHIVDASANI, A. & ZENNER, M. 2004. Best Practices In Corporate Governance: What Two Decades Of Research Reveals. *Journal of Applied Corporate Finance,* 16**,** 29-41.
SHLEIFER, A. & VISHNY, R. W. 1986. Large Shareholders and Corporate Control. *Journal of Political Economy,* 94**,** 461-488.
SHOCKER, A. D. & SEITHI, S. P. 1974. *An Approach to Incorporating Social Preferences in Developing Corporate Action Strategies,* Los Angels, Melviville Publishing Company.
SHORES, D. 1990. The Association Between Interim Information and Security Returns Surrounding Earnings Announcements. *Journal of Accounting Research,* 28, Spring**.,** 164-181.
SIDNEY, L. & BERTRAND, H. 2004. Director Ownership and Voluntary Segment Disclosure: Hong Kong Evidence. *Journal of International Financial Management & Accounting,* 15**,** 235-260.
SIEGEL, S. 1956. *Nonparametric Statistics,* New York, McGraw Hill.
SIEGEL, S. & CASTELLAN, N. J. 1988. *Nonparametric statistics for the behavioral sciences,* Boston, McGraw-Hill.
SINGH, A. 1971. *Take-overs: relevance to the Stock market and the Theory of the Firm,* Cambridge, The University Press.
SINGH, A. 1999. Should Africa promote stock market capitalism? *Journal of International Development,* 11**,** 343-365.
SINGHVI, S. 1967. Corporate Disclosure Through Annual Reports in the USA and India (unpublished dissertation, Columbia University)
SINGHVI, S. 1968. Characteristics and Implications of Inadequate Disclosure: A Case Study of India. *The International Journal of Accounting and business research,* 3**,** 29-43.
SINGHVI, S. S. & DESAI, H. B. 1971a. An empirical analysis of the quality of corporate financial disclosure. *Accounting Review,* 46**,** 129-138.
SINGHVI, S. S. & DESAI, H. B. 1971b. An Empirical Analysis of the Quality of Corporate Financial Disclosure. *The Accounting Review,* 46**,** 129-138.
SINNETT, W. M. & GRAZIANO, C. M. 2006. What Do Users of Private Company Financial Statements Want? *Private Company research Series.* Financial Executive Research Foundation.
SMITH, A. 1776. *An Enquiry into the Causes of Wealth of Nations,* New York, Random House, 1937.
SMITH, C. W. & WARNER, J. 1979. On Financial Contracting: An Analysis of Bond Covenants. *Journal of Financial Economics,* 7**,** 117-161.
SMITH, J. L., ADHIHARI, A. & TONDKAR, R. H. 2005. Exploring Differences in Social Disclosures Internationally: A Stakeholder Perspective. *Journal of Accounting and Public Policy,* 24**,** 123-151.
SMITH, M., YAHYA, K. & AMIRUDDIN, A. H. 2007. Environmental Disclosure and Performance Reporting in Malaysia. *Asian Review of Accounting,* 15**,** 185-199.
SOH, C. S. 1996. Factors Influencing Company Information Disclosure: An Empirical Study of Companies Listed on the KLSE. *PhD Thesis, University of Warwick,*.
SONG, X. 2012. Corporate Characteristics and Internal Control Information Disclosure: Evidence from Annual Reports in 2009 of Listed Companies in Shenzhen Stock Exchange. *Physics Procedia,* 25**,** 630-635.

SOY, S. K. 1996. *The Case Study as a Research Method* [Online]. http: //www. gslis. utexas. edu/~ssoy/usesusers/l391d1b. htm. Available: http: //www. gslis. utexas. edu/~ssoy/usesusers/l391d1b. htm [Accessed 4 March 2009].

SPENCE, M. 1973. Job market signalling. *Quarterly Journal of Economics,* 87**,** 29-30.

SPERO, L. L. 1979. *The Extent and Causes of Voluntary Disclosure of Financial Information in Three European Capital markets: An Explanatory Study (Unpublished doctoral dissertation).* Doctoral Thesis Unpublished doctoral dissertation, Harvard University.

STANGA, K. G. 1976. Disclosure in Published Annual Reports. *Financial Management - Oxford,* 5**,** 42-52.

STAROVIC, D. & MARR, B. 2003. Understanding Corporate Value - Measuring and Reporting Intellectual Capital. London: Chartered Institute of Management Accountants.

STIGLER, G. L. 1971. The Theory of Economic Regulation. *Bell Journal of Economics and Management,* Fall**,** 3-21.

STONE, D. E. 1967. The Objective of Financial Reporting in the Annual Reports. *Accounting Review,* April, XL11**,** 331-337.

SU, L. D. 2010. ownership structure, corporate diversification capital structure: evidence from china's publicly listed firms. *Management decision,* 48**,** 314.

SUJAN, A. & ABEYSEKERA, I. 2007. Intellectual Capital Reporting Practices of the Top Australian Firms. *Australian Accounting Review,* 17**,** 71-83.

SUTTIPUN, M. & STANTON, P. 2012. Determinants of Environmental Disclosure in Thai Corporate Annual Reports. *International Journal of Accounting and Financial Reporting,* 2.

SWINT, B. & BLUM, J. 2010. Available: http://www.bloomberg.com/news/2010-12-16/bp-falls-most-in-four-months-after-u-s-files-lawsuit-over-gulf-oil-spill.html [Accessed 16.12.2010].

TABACHNICK, B. G. & FIDELL, L. S. 1996. *Using Multivariate Statistics,* New York, HarperCollins.

TAN, S. & TOWER, G. D. 1997. Comparing Compliance: Too Much Regulation, or Insufficient Attention? *Australian CPA,* 67**,** 56-59.

TASKER, S. 1998. Bridging the information gap: Quarterly conference calls as a medium for voluntary disclosure. *Review of Accounting Studies,* 3**,** 137-167.

TAURINGANA, D. V. & MANGENA, D. M. 2006a. Complementary narrative commentaries of statutory accounts in annual reports of UK listed companies. *Journal of Applied Accounting Research,* 8**,** 71.

TAURINGANA, V. 1997. *The Impact of Listing Status and selected Company Characteristics on Voluntary Disclosure in the United Kingdom.* Ph.D., Napier University.

TAURINGANA, V. & CHONG, G. 2004. Neutrality of narrative discussion in annual reports of UK listed companies. *Journal of Applied Accounting Research,* 7**,** 74-107.

TAURINGANA, V., KYEYUNE, M. & OPIO, P. J. 2008. Corporate Governance, Dual Language Reporting and the Timeliness of Annual Reports on the Nairobi Stock Exchange. Corporate Governance in Less Developed Emerging Economies. *Research in Accounting in Emerging Economies,* 8**,** 13-37.

TAURINGANA, V. & MANGENA, M. 2006b. Complementary Narrative Commentaries of Statutory Accounts in United Kingdom Listed Companies. *The Journal of Applied Accounting Research,* 8**,** 71-109.

TAURINGANA, V. & MANGENA, M. 2006c. Complementary narrative commentaries of Statutory Accounts in United Kingdom litsted companies. *The Journal of Applied Accounting Research,* 8**,** 71 - 109.

TAURINGANA, V. & MANGENA, M. 2009. The Influence of the Business Review on Key Performance Indicators Reporting in the UK Media Sector. The Institute of Chartered Accountants of Scotland.
TEHRANIAN, H. & WAEGELEIN, J. F. 1985. Market Reaction to Short-Term Executive Plan Adoption. *Journal Accounting and Economics,* 7**,** 131-144.
TEOH, S. H. 1992. Auditor's independence, dismissal threats and the market reaction on auditor switches. *Journal of Accounting Research,* 30**,** 1-23.
TILLING, M. V. & TILT, C. A. 2010. The Edge of Legitimacy: Voluntary Social and Environmental Reporting in Rothmans 1956-1999 Annual Reports. *Accounting, Auditing & Accountability Journal,* 23**,** 55-81.
TINSLEY, H. E. A. & WEISS, D. J. 2000. Interrater reliability and agreement. *In:* TINSLEY, H. E. A. & BROWN, S. D. (eds.) *Handbook of Applied Multivariate Statistics and Mathematical Modeling.* San Diego, CA: Academic Press.
TOBIN, J. 1984. On efficiency of the financial system. *Lloyd's Bank Review,* 153**,** 1-15.
TRAYER, H. & WARREN, A. 2005. Design and the Annual Report the Communications Challenge. *Accountancy Ireland,* 37.
TRUCOST GUIDE 2005. EU Accounts Modernisation Directive.
TRUEMAN, B. 1986. Why Do Managers Voluntarily Release Earnings Forecasts? *Journal of Accounting and Economics***,** 53-72.
VAFEAS, N. 1999. Board Meeting Frequency and Firm Performance. *Journal of Financial Economics,* 53**,** 113-142.
VAFEAS, N. 2000. Board Structure and the Informativeness of Earnings. *Journal of Accounting and Public Policy,* 19**,** 139-160.
VAN DEN BERGHE, L. A. A. & LEVRAU, A. 2004. Evaluating Boards Of Directors: What Constitutes A Good Corporate Board? *Corporate Governance: An International Review of Financial Analysis,* 12**,** 461-478.
VAN DER LAAN, S. 2009. The Role of Theory in Explaining Motivation for Corporate Social Disclosures: Voluntary Disclosures vs 'Solicited' Disclosures. *Australasian Accounting Business and Finance Journal,* 3.
VERECCHIA, R. E. 1983. Discretionary Disclosure Information. *Journal of Accounting and Economics,* 5**,** 179-194.
WALL, A. & MARTIN, G. 2003. The Disclosure of Key Performance Indicators in the Public Sector. *Public Management Review,* 5**,** 491-509.
WALLACE, R. S. O. 1987. *Disclosure of Accounting Information in Developing Countries: A Case Study of Nigeria, Unpublished Doctoral Dissertation.* Ph.D, Exeter University.
WALLACE, R. S. O. & NASER, K. 1995. Firm-Specific Determinants of the Comprehensiveness of Mandatory Disclosure in the Corporate Annual Reports of Firms Listed on the Stock Exchange of Hong Kong. *Journal of Accounting and Public Policy,* 14**,** 311-368.
WALLACE, R. S. O., NASER, K. & MORA, A. 1994a. The Relationship Between the Comprehensiveness of Corporate Annual Reports and Firm Characteristics in Spain. *Accounting and business research,* 25**,** 41-53.
WALLACE, R. S. O., NASER, K. & MORA, A. 1994b. The relationship between the comprehensiveness of corporate annual reports and firm specific characteristics in Spain. *Accounting and Business Research,* 25**,** 41-53.
WALLACE, R. S. O. & NASSER, K. 1995. Firm specific determinants of the comprehensiveness of mandatory disclosures in the corporate annual reports of firms listed on the stock exchange of Hong Kong. *Journal of Accounting and Public Policy,* 14**,** 41-53.
WALLMAN, S. 1996. "The Future of Accounting and Financial Reporting, part II: the Colorized Approach". *Accounting Horizons,* 10**,** 138-148.

WALLMAN, S. 1997. "The Future of Accounting and Financial Reporting, part IV: Access Accounting". *Accounting Horizons,* 11**,** 103-116.
WAN-HUSSIN, W. N. 2009. The Impact of Family-firm Structure and Board Composition on Corporate Transparency: Evidence Based on Segment Disclosures in Malaysia. *The International Journal of Accounting,* In Press, Corrected Proof.
WANG, K., O, S. & CLAIBORNE, M. C. 2008. Determinants and Consequences of Voluntary Disclosure in an Emerging Market: Evidence from China. *Journal of International Accounting, Auditing and Taxation,* 17**,** 14-30.
WANG, K. O. S. & CLAIBORNE, M. C. 2008. Determinants and Consequences of Voluntary Disclosure in an Emerging Market: Evidence from China. *Journal of International Accounting, Auditing and Taxation,* 17**,** 14-30.
WARFIELD, T. D., WILD, J. J. & WILD, K. L. 1995. Managerial Ownership, Accounting Choices, and Informativeness of Earnings. *Journal of Accounting and Economics,* 20**,** 61-91.
WATSON, A., SHRIVES, P. & MARSTON, C. 2002a. Voluntary Disclosure of Accounting Ratios in the UK. *The British Accounting Review,* 34**,** 289-313.
WATSON, A., SHRIVES, P. & MARSTON, C. 2002b. Voluntary disclosure of accounting ratios in the UK. *British Accounting Review,* 34**,** 289-313.
WATSON, A., SHRIVES, P. & MARSTON, C. 2002c. Voluntary disclosure of accounting ratios in the UK. *British Accounting Review,* 34**,** 289-313.
WATTS, R. L. 1977. Corporate Financial Statements, A product of Market and political Process. *In The Economics of Accounting Policy Choice.,* Ball, R., and Smith, C.W.(eds) Magraw Hill.
WATTS, R. L. & ZIMMERMAN, J. L. 1978. Towards A Positive Theory of the Determination of Accounting Standards. *Accounting Review,* 53**,** 112-134.
WATTS, R. L. & ZIMMERMAN, J. L. 1986. *Positive Accounting Theory,* Englewood Cliffs, NJ., Prentice Hall.
WEBER, R. P. 1985. *Basic content analysis, quantitative applications in the social sciences*, Beverly Hills, CA: Sage Publications.
WEI-PING, W. 2008. Dimensions of Social Capital and Firm Competitiveness Improvement: The Mediating Role of Information Sharing. *Journal of Management Studies,* 45**,** 122-146.
WELKER, M. 1995a. Disclosure Policy, Information Asymmetry and Liquidity in Equity Markets. *Contemporary Accounting Research,* Spring**,** 801-828.
WELKER, M. 1995b. Disclosure policy, information asymmetry and liquidity in equity markets. *Contermporary Accounting Research,* Spring**,** 801-828.
WHITING, R. H. & WOODCOCK, J. 2011. Firm Characteristics and Intellectual Capital Disclosure by Australian Companies. *Journal of Human Resource Costing & Accounting,* 15**,** 102-126.
WILLIAMS, R. J., FADIL, P. A. & ARMSTRONG, R. W. 2005. Top Management Team Tenure and Corporate Illegal Activity: The Moderating Influence of Board Size. *Journal of Managerial Issues,* 17**,** 479-493.
WILLIAMS, S. M. 1999. Voluntary Environmental and Social Accounting Disclosure Practices in the Asia-Pacific Region: An International Empirical Test of Political Economy Theory. *The International Journal of Accounting* 34**,** 209-238.
WILLIAMSON, O. E. 1963. Managerial Discretionary Behaviour. *American Economic Review of Accounting Studies,* 53**,** 1032-1057.
WILTON, R. L. & TABB, J. B. 1978. An Investigation into Private Shareholder Usage of Financial Statements in New Zealand. *Accounting Education,* May**,** 171.

WINFIELD, R. R. 1978. Shareholder Opinion of Published Financial Statements. *A paper presented at the Accounting Association of Australia and New Zealand, University of Otago, New Zealand.*

WISEMAN, R. M., CUEVAS-RODRÍGUEZ, G. & GOMEZ-MEJIA, L. R. 2011. Towards a Social Theory of Agency. *Journal of Management Studies*.

WONG-BOREN, A. & CHOW, C. W. 1987. Voluntary Financial Disclosure by Mexican Corporations. *The accounting review,* 62**,** 533-541.

WRIGHT, D. B. 1997. *Understanding Statistics: An Introduction for the Social Sciences,* London, Sage Publications.

WRIGHT, D. W. 1996. Evidence on the relation between corporate governance characteristics and the quality of financial reporting. *Working Paper Series, University of Michigan*.

XIAO, J. Z., YANG, H. & CHOW, C. W. 2004. The Determinants and Characteristics of Voluntary Internet-based Disclosures by Listed Chinese Companies. *Journal of Accounting and Public Policy,* 23**,** 191-225.

XIE, B., DAVIDSON III, D. N. & DADALT, P. J. 2003. Earnings Management And Corporate Governance: The Role Of The Board And The Audit Committee. *Journal of Corporate Finance,* 9**,** 295-316.

XIE, B., DAVIDSON, W. N. & DADALT, P. J. 2001. Earnings Management and Corporate Governance: The Roles of the Board and the Audit Committee. *Available at SSRN: http://ssrn.com/abstract=304195 or DOI: 10.2139/ssrn.304195*.

YANG, Q. & CROWTHER, D. 2012. Chapter 7: The Relationship between CSR, Profitability and Sustainability in China. *Business Strategy and Sustainability (Developments in Corporate Governance and Responsibility).* Güler Aras and David Crowther ed.: Emerald Group Publishing Limited.

YATIM, P., KENT, P. & CLARKSON, P. 2006. Governance Structures, Ethnicity, and Audit Fees of Malaysian Listed Firms. *Managerial Auditing Journal,* 21**,** 757-782.

YERMACK, D. 1996. Higher Market Valuation of Companies with Small Board of Directors. *Journal of Financial Economics,* 40**,** 185-211.

YOON, H., ZO, H. & CIGANEK, A. P. 2011. Does XBRL Adoption Reduce Information Asymmetry? *Journal of Business Research,* 64**,** 157-163.

ZAHRA, S. A., NEUBAUM, D. O. & HUSE, M. 2000. Entrepreneurship in Medium-size Companies: Exploring the Effects of Ownership and Governance Systems. *Journal of Management Studies,* 26**,** 947-976.

ZARZESKI, M. T. 1996. Spontaneous Harmonization Effects of Culture and Market Forces on Accounting Disclosure Practices. *Accounting Horizons,* 10**,** 18.

ZEGHAL, D. & AHMED, S. A. 1990. Comparison of Social Responsibility Information Disclosure Media Used by Canadian Firms. *Accounting, Auditing & Accountability Journal,* 3**,** 38-53.

ZHANG, L. & DING, S. 2006. The effect of increased disclosure on cost of capital: Evidence from China. *Review of Quantitative Finance and Accounting,* 27**,** 383-401.

ZHU, H., IBRAHIM, J. G. & CHO, H. 2012. Perturbation and Scaled Cook's Distance. *Submitted to the Annals of Statistics*.

ZOURARAKIS, N. S. 2009. Voluntary disclosure: Evidence from UK. *Accountability: Papers from Master Theses (Erasmus Universiteit Rotterdam)***,** 83-103.

ZOYSA, A. & RUDKIN, K. 2010. An Investigation of Perceptions of Company Annual Report Users in Sri Lanka. *International Journal of Emerging Markets,* 5**,** 183-202.

Appendix

Appendix 1: Reliability Data for Private Limited Companies

1. New Look		
Variable	**NL2008A**	**NL2008B**
KPISCORE	0.06202	0.06
WCOUNT	0.01127	0.01
COMP	0.82	0.8
PNED	0.6250	0.6
AUDSIZE	3	3
BOARDM	6	6
FINEXP	0.6250	0.63
BDSIZE	8	8
DSHARE	0.0005576	0.0006
COSIZE	1283100	1283000
GEAR	0.5814	0.6
PROF	0.0000	0
LQDT	0.650	0.7
MULTIN	1	1
LSTAT	0	0
MLIST	0	0

2. PA Consulting Group		
Variable	**PA2008A**	**PA2008B**
KPISCORE	0.00000	0
WCOUNT	0.00000	0
COMP	0.00	0
PNED	0.3750	0.38
AUDSIZE	4	4
BOARDM	9	9
FINEXP	0.6250	0.6
BDSIZE	8	8
DSHARE	0.1580745	0.16
COSIZE	426681	426680
GEAR	0.5656	0.6
PROF	0.1337	0.1
LQDT	2.520	2.5
MULTIN	1	1
LSTAT	0	0
MLIST	0	0

3. Spire Healthcare		
Variable	**SH2008A**	**SH2008B**
KPISCORE	0.09009	0.09
WCOUNT	0.02411	0.02
COMP	1.00	1
PNED	0.3333	0.3
AUDSIZE	5	5
BOARDM	8	8
FINEXP	0.5833	0.6
BDSIZE	12	12
DSHARE	0.0387400	0.04
COSIZE	1511622	1511600
GEAR	0.0069	0.007
PROF	0.2416	0.2
LQDT	12.790	12.8
MULTIN	0	0
LSTAT	0	0
MLIST	0	0

4. John Laing		
Variable	**JL2008A**	**JL2008B**
KPISCORE	0.00000	0
WCOUNT	0.00000	0
COMP	0.00	0
PNED	0.4286	0.4
AUDSIZE	3	3
BOARDM	10	10
FINEXP	0.4286	0.4
BDSIZE	7	7
DSHARE	0.0894750	0.09
COSIZE	1902800	1902800
GEAR	3.2702	3.3
PROF	0.0000	0
LQDT	2.990	3
MULTIN	1	1
LSTAT	0	0
MLIST	0	0

5. Anglian Water		
Variable	**AW2008A**	**AW2008B**
KPISCORE	0.06667	0.067
WCOUNT	0.00967	0.01
COMP	0.54	0.5
PNED	0.2500	0.3
AUDSIZE	3	3
BOARDM	7	7
FINEXP	0.6667	0.7
BDSIZE	12	12
DSHARE	0.0000000	0
COSIZE	6939000	6939000
GEAR	3.4867	3.5
PROF	0.3184	0.3
LQDT	1.380	1.4
MULTIN	0	0
LSTAT	0	0
MLIST	0	0

6. Unipart Group		
Variable	**UG2008A**	**UGS2008B**
KPISCORE	0.04918	0.05
WCOUNT	0.02657	0.03
COMP	0.72	0.7
PNED	0.5000	0.5
AUDSIZE	4	4
BOARDM	6	6
FINEXP	0.6250	0.6
BDSIZE	8	8
DSHARE	0.0500600	0.05
COSIZE	427800	427800
GEAR	0.4515	0.5
PROF	0.0179	0.02
LQDT	0.870	0.9
MULTIN	1	1
LSTAT	0	0
MLIST	0	0

7. Associated British Ports		
Variable	**AB2008A**	**AB2008B**
KPISCORE	0.07273	0.07
WCOUNT	0.01839	0.02
COMP	0.65	0.7
PNED	0.6364	0.6
AUDSIZE	4	4
BOARDM	8	8
FINEXP	0.5455	0.5
BDSIZE	11	11
DSHARE	0.0000000	0
COSIZE	8.151E+09	8151000000
GEAR	0.3598	0.4
PROF	0.4823	0.5
LQDT	0.940	0.9
MULTIN	1	1
LSTAT	0	0
MLIST	0	0

8. Halcrow Holdings Limited		
Variable	**HHS2008A**	**HH2008B**
KPISCORE	0.00000	0
WCOUNT	0.00000	0
COMP	0.00	0
PNED	0.3333	0.3
AUDSIZE	4	4
BOARDM	6	6
FINEXP	0.5556	0.6
BDSIZE	9	9
DSHARE	0.0192408	0.02
COSIZE	211135	211135
GEAR	4.4091	4.4
PROF	0.0265	0.03
LQDT	1.380	1.4
MULTIN	1	1
LSTAT	0	0
MLIST	0	0

9. Kwik Fit		
Variable	**KF2008A**	**KF2008B**
KPISCORE	0.06299	0.06
WCOUNT	0.02569	0.03
COMP	0.52	0.5
PNED	0.5714	0.6
AUDSIZE	3	3
BOARDM	8	8
FINEXP	0.2857	0.3
BDSIZE	7	7
DSHARE	0.0000000	0
COSIZE	970300	970300
GEAR	0.3459	0.35
PROF	0.2151	0.2
LQDT	1.630	1.6
MULTIN	1	1
LSTAT	0	0
MLIST	0	0

10. C&J Clarke		
Variable	**CJ2008A**	**CJ2008B**
KPISCORE	0.06202	0.06
WCOUNT	0.01931	0.02
COMP	0.80	0.8
PNED	0.6667	0.7
AUDSIZE	3	3
BOARDM	6	6
FINEXP	0.1667	0.2
BDSIZE	6	6
DSHARE	0.4228490	0.4
COSIZE	586900	586900
GEAR	0.8076	0.8
PROF	0.0774	0.08
LQDT	0.880	0.9
MULTIN	1	1
LSTAT	0	0
MLIST	0	0

11. Monsoon Limited		
Variable	**ML2008A**	**ML2008B**
KPISCORE	0.00000	0
WCOUNT	0.00000	0
COMP	0.00	0
PNED	0.4444	0.4
AUDSIZE	5	5
BOARDM	9	9
FINEXP	0.3333	0.3
BDSIZE	9	9
DSHARE	0.0120387	0.01
COSIZE	305828	305830
GEAR	0.0623	0.06
PROF	0.0845	0.08
LQDT	1.090	1.1
MULTIN	0	0
LSTAT	0	0
MLIST	0	0

12. Barchester Healthcare Limited		
Variable	**BH2008A**	**BH2008B**
KPISCORE	0.00000	0
WCOUNT	0.00000	0
COMP	0.00	0
PNED	0.1667	0.2
AUDSIZE	3	3
BOARDM	6	6
FINEXP	0.1667	0.2
BDSIZE	6	6
DSHARE	0.1133866	0.1
COSIZE	439492	439500
GEAR	1.3498	1.3
PROF	0.0313	0.03
LQDT	1.100	1.1
MULTIN	0	0
LSTAT	0	0
MLIST	0	0

13. Virgin Atlantic		
Variable	**VA2008A**	**VA2008B**
KPISCORE	0.00000	0
WCOUNT	0.00000	0
COMP	0.00	0
PNED	0.4286	0.4
AUDSIZE	3	3
BOARDM	9	9
FINEXP	0.4286	0.4
BDSIZE	7	7
DSHARE	0.0044657	0.004
COSIZE	1383300	1383300
GEAR	0.5521	0.6
PROF	-0.0148	-0.015
LQDT	1.150	1.2
MULTIN	1	1
LSTAT	0	0
MLIST	0	0

14. Shop Direct Group			
Variable	**SD2008A**		**SD2008C**
KPISCORE	0.00000		0
WCOUNT	0.00000		0
COMP	0.00		0
PNED	0.2000		0.2
AUDSIZE	3		3
BOARDM	12		12
FINEXP	0.0000		0
BDSIZE	5		5
DSHARE	0.0046000		0.0046
COSIZE	2353900		2354000
GEAR	0.4442		0.44
PROF	0.0142		0.014
LQDT	0.920		0.92
MULTIN	1		1
LSTAT	0		0
MLIST	0		0

15. Wilkinson			
Variable	**WK2008A**		**WK2008C**
KPISCORE	0.07874		0.079
WCOUNT	0.09159		0.092
COMP	0.44		0.44
PNED	0.6000		0.6
AUDSIZE	4		4
BOARDM	9		9
FINEXP	0.3000		0.3
BDSIZE	10		10
DSHARE	0.0556730		0.056
COSIZE	370779		370800
GEAR	0.0634		0.0634
PROF	-0.0578		-0.058
LQDT	0.160		0.16
MULTIN	0		0
LSTAT	0		0
MLIST	0		0

16. Martin McColl			
Variable	**MM2008A**		**MM2008C**
KPISCORE	0.00000		0
WCOUNT	0.00000		0
COMP	0.00		0
PNED	0.2222		0.22
AUDSIZE	4		4
BOARDM	11		11
FINEXP	0.3333		0.33
BDSIZE	9		9
DSHARE	0.5214680		0.521
COSIZE	278121		278000
GEAR	7.8015		7.8
PROF	0.0580		0.058
LQDT	0.330		0.33
MULTIN	0		0
LSTAT	0		0
MLIST	0		0

17. Aston Martin			
Variable	**AM2008A**		**AM2008C**
KPISCORE	0.00000		0
WCOUNT	0.00000		0
COMP	0.00		0
PNED	0.6667		0.67
AUDSIZE	3		3
BOARDM	8		8
FINEXP	0.6667		0.67
BDSIZE	6		6
DSHARE	0.8169172		0.817
COSIZE	767716		767716
GEAR	0.6945		0.69
PROF	0.0660		0.066
LQDT	0.430		0.43
MULTIN	0		0
LSTAT	0		0
MLIST	0		0

18. Bargain Booze			
Variable	**BB2008A**	**BB2008C**	
KPISCORE	0.03937	0.04	
WCOUNT	0.00858	0.009	
COMP	0.78	0.8	
PNED	0.2222	0.2	
AUDSIZE	4	4	
BOARDM	9	9	
FINEXP	0.3333	0.3	
BDSIZE	9	9	
DSHARE	0.6215400	0.6	
COSIZE	104504	104500	
GEAR	1.3911	1.4	
PROF	0.0016	0.002	
LQDT	1.110	1.1	
MULTIN	0	0	
LSTAT	0	0	
MLIST	0	0	

19. Manchester United		
Variable	**MU2008A**	**MU2008C**
KPISCORE	0.03509	0.04
WCOUNT	0.00798	0.008
COMP	1.00	1
PNED	0.0000	0
AUDSIZE	6	6
BOARDM	9	9
FINEXP	0.3000	0.3
BDSIZE	10	10
DSHARE	0.0120387	0.01
COSIZE	446688	446700
GEAR	0.3104	0.3
PROF	0.0068	0.007
LQDT	2.740	2.7
MULTIN	0	0
LSTAT	0	0
MLIST	0	0

20. Stewart Milne			
Variable	**SM2008A**		**SM2008C**
KPISCORE	0.00000		0
WCOUNT	0.00000		0
COMP	0.00		0
PNED	0.7143		0.71
AUDSIZE	3		3
BOARDM	7		7
FINEXP	0.4286		0.429
BDSIZE	7		7
DSHARE	0.9542100		0.954
COSIZE	538663		538700
GEAR	0.5946		0.595
PROF	0.0017		0.0017
LQDT	0.670		0.67
MULTIN	0		0
LSTAT	0		0
MLIST	0		0

Appendix 2: Reliability Data for Public Listed Companies

1. Misys			
Variable	**MS2008A**		**MS2008C**
KPISCORE	0.02326		0.025
WCOUNT	0.003212731		0.003051
COMP	0.36		0.32
PNED	0.71428		0.7143
AUDSIZE	3		3
BOARDM	12		12
FINEXP	0.428571		0.429
BDSIZE	7		7
DSHARE	0.00856095		0.006235
COSIZE	349905.6		35000
GEAR	0.2771		0.28
PROF	0.0993		0.0857
LQDT	0.74		0.733
MULTIN	1		1
LSTAT	1		1
MLIST	1		1

2. Babcock International Group			
Variable	**BI2008A**		**BI2008C**
KPISCORE	0.06612		0.066
WCOUNT	0.0275288		0.028
COMP	0.6		0.6
PNED	0.75		0.75
AUDSIZE	3		3
BOARDM	9		9
FINEXP	0.25		0.25
BDSIZE	8		8
DSHARE	0.0030794		0.0031
COSIZE	1466146		1470000
GEAR	1.6769		1.68
PROF	0.0544		0.054
LQDT	0.85		0.85
MULTIN	1		1
LSTAT	1		1
MLIST	1		1

3. British Petroleum			
Variable	**BP2008A**		**BP2008C**
KPISCORE	0.11207		0.112
WCOUNT	0.00726025		0.0073
COMP	0.5		0.5
PNED	0.642857		0.643
AUDSIZE	4		4
BOARDM	9		9
FINEXP	0.428571		0.43
BDSIZE	14		14
DSHARE	0.00056761		0.00057
COSIZE	130874.4		130900
GEAR	0.8786		0.88
PROF	0.0934		0.093
LQDT	0.71		71
MULTIN	1		1
LSTAT	1		1
MLIST	1		1

4. Cable and Wireless			
Variable	**CW2008A**		**CW2008C**
KPISCORE	0.02273		0.023
WCOUNT	0.008712488		0.0087
COMP	0.77		0.77
PNED	0.636363636		0.64
AUDSIZE	5		5
BOARDM	8		8
FINEXP	0.36363636		0.36
BDSIZE	11		11
DSHARE	0.00158695		0.0016
COSIZE	2711.2		2700
GEAR	-0.042		-0.042
PROF	0.4194		0.419
LQDT	0.84		0.84
MULTIN	1		1
LSTAT	1		1
MLIST	1		1

5. G4S			
Variable	**GS2008A**		**GS2008C**
KPISCORE	0.02479		0.0248
WCOUNT	0.00783579		0.0078
COMP	0.85		0.85
PNED	0.44444		0.4
AUDSIZE	3		3
BOARDM	8		8
FINEXP	0.333333		0.33
BDSIZE	9		9
DSHARE	0.00454389		0.0045
COSIZE	5576700		5577000
GEAR	1.4498		1.45
PROF	0.0445		0.0445
LQDT	1.23		1.23
MULTIN	1		1
LSTAT	1		1
MLIST	1		1

6. Smith and Nephew			
Variable	**SN2008A**		**SN2008C**
KPISCORE	0.02941		0.029
WCOUNT	0.01144569		0.0114
COMP	0.75		0.75
PNED	0.75		0.75
AUDSIZE	4		4
BOARDM	8		8
FINEXP	0.4166666		0.417
BDSIZE	12		12
DSHARE	0.00080652		0.00081
COSIZE	341121.6		341121
GEAR	0.34221		0.342
PROF	0.143		0.143
LQDT	0.84		0.84
MULTIN	1		1
LSTAT	1		1
MLIST	1		1

7. InterContinetalHotels Group			
Variable	**IC2008A**		**IC2008C**
KPISCORE	0.04464		0.0446
WCOUNT	0.0121097		0.01211
COMP	0.85		0.85
PNED	0.6666667		0.67
AUDSIZE	4		4
BOARDM	8		8
FINEXP	0.444444		0.44
BDSIZE	9		9
DSHARE	0.0018876		0.00189
COSIZE	2123000		2123000
GEAR	25.1957		25.2
PROF	0.1594		0.16
LQDT	0.47		0.47
MULTIN	1		1
LSTAT	1		1
MLIST	0		0

8. Michael Page			
Variable	**MP2008A**	**MP2008D**	
KPISCORE	0.04132	0.04	
WCOUNT	0.0027557	0.003	
COMP	0.66	0.7	
PNED	0.5714286	0.6	
AUDSIZE	4	4	
BOARDM	6	6	
FINEXP	0.428571	0.43	
BDSIZE	7	7	
DSHARE	0.0032149	0.003	
COSIZE	427554	428000	
GEAR	0.3082	0.3	
PROF	0.1440	0.14	
LQDT	1.71	1.7	
MULTIN	1	1	
LSTAT	1	1	
MLIST	1	1	

9. Persimmon			
Variable	**PM2008A**	**PM2008D**	
KPISCORE	0.05844	0.06	
WCOUNT	0.005882043	0.006	
COMP	0.5	0.5	
PNED	0.6	0.6	
AUDSIZE	3	3	
BOARDM	10	10	
FINEXP	0.2	0.2	
BDSIZE	10	10	
DSHARE	0.002229007	0.002	
COSIZE	3153900	3154000	
GEAR	0.6254	0.6	
PROF	-0.4389	-0.4	
LQDT	0.21	0.2	
MULTIN	0	0	
LSTAT	1	1	
MLIST	1	1	

10. Reed Elsevier			
Variable	**RE2008A**	**RE2008D**	
KPISCORE	0.16814	0.17	
WCOUNT	0.007849426	0.008	
COMP	0.92	0.9	
PNED	0.5	0.5	
AUDSIZE	3	3	
BOARDM	6	6	
FINEXP	0.333333333	0.3	
BDSIZE	12	12	
DSHARE	0.00113977	0.001	
COSIZE	12714000	12714000	
GEAR	8.2294	8.2	
PROF	0.1153	0.1	
LQDT	0.53	0.5	
MULTIN	1	1	
LSTAT	1	1	
MLIST	1	1	

11. JD Wetherspoon		
Variable	**JD2008A**	**JD2008D**
KPISCORE	0.13636	0.14
WCOUNT	0.00698603	0.007
COMP	0.5	0.5
PNED	0.4	0.4
AUDSIZE	3	3
BOARDM	8	8
FINEXP	0.1	0.1
BDSIZE	10	10
DSHARE	0.06814859	0.07
COSIZE	850947	850947
GEAR	3.0162	3
PROF	0.0597	0.06
LQDT	0.24	0.2
MULTIN	0	0
LSTAT	1	1
MLIST	0	0

12. Royal Dutch Shell		
Variable	**RD2008A**	**RD2008D**
KPISCORE	0.068965517	0.07
WCOUNT	0.009253335	0.009
COMP	0.84	0.8
PNED	0.64286	0.6
AUDSIZE	3	3
BOARDM	10	10
FINEXP	0.5454545	0.5
BDSIZE	14	14
DSHARE	2.594E-05	0.00003
COSIZE	190446000	190450000
GEAR	0.3981	0.4
PROF	0.1091	0.12
LQDT	0.92	0.9
MULTIN	1	1
LSTAT	1	1
MLIST	0	0

13. Rentokil Initial		
Variable	**RI2008A**	**RI2008D**
KPISCORE	0.14876033	0.15
WCOUNT	0.0089333	0.009
COMP	0.93	0.9
PNED	0.555556	0.6
AUDSIZE	3	3
BOARDM	7	7
FINEXP	0.555556	0.6
BDSIZE	9	9
DSHARE	0.000998	0.001
COSIZE	2242500	2242500
GEAR	2.2951	2.3
PROF	0.0095	0.01
LQDT	0.76	0.8
MULTIN	1	0
LSTAT	1	1
MLIST	0	0

14. Ladbrokes		
Variable	**LB2008A**	**LB2008D**
KPISCORE	0.044247788	0.04
WCOUNT	0.010480379	0.01
COMP	0.65	0.7
PNED	0.857	0.9
AUDSIZE	3	3
BOARDM	9	9
FINEXP	0.57142	0.6
BDSIZE	7	7
DSHARE	0	0
COSIZE	1274100	1274100
GEAR	0.9277	0.9
PROF	0.2131	0.2
LQDT	0.32	0.3
MULTIN	1	1
LSTAT	1	1
MLIST	1	1

15. Chloride Group		
Variable	**CG2008A**	**CG2008D**
KPISCORE	0.036764706	0.04
WCOUNT	0.004934855	0.005
COMP	0.64	0.6
PNED	0.666667	0.7
AUDSIZE	4	4
BOARDM	9	9
FINEXP	0.3333333	0.3
BDSIZE	6	6
DSHARE	0.022757	0.02
COSIZE	247473	247500
GEAR	0.609	0.6
PROF	0.117	0.1
LQDT	1.04	1
MULTIN	0	0
LSTAT	1	1
MLIST	0	0

16. Dairy Crest Group		
Variable	**DC2008A**	**DC2008D**
KPISCORE	0	0
WCOUNT	0	0
COMP	0	0
PNED	0.6	0.6
AUDSIZE	4	4
BOARDM	10	10
FINEXP	0.3	0.3
BDSIZE	10	10
DSHARE	0	0
COSIZE	1205000	1205000
GEAR	1.489	1.5
PROF	0.0417	0.042
LQDT	0.85	0.9
MULTIN	0	0
LSTAT	1	1
MLIST	0	0

17. Millennium and Copthorne Hotel		
Variable	**MC2008A**	**MC2008D**
KPISCORE	0	0
WCOUNT	0	0
COMP	0	0
PNED	0.8333333	0.8
AUDSIZE	3	3
BOARDM	11	11
FINEXP	0.5	0.5
BDSIZE	6	6
DSHARE	0	0
COSIZE	2932600	2932600
GEAR	0.9937	1
PROF	0.0392	0.04
LQDT	1.12	1.1
MULTIN	1	0
LSTAT	1	1
MLIST	0	0

18. Domino's Pizza		
Variable	**DP2008A**	**DP2008D**
KPISCORE	0.05970149	0.06
WCOUNT	0.01705191	0.02
COMP	0.76	0.8
PNED	0.666667	0.7
AUDSIZE	4	4
BOARDM	9	9
FINEXP	0.3333333	0.3
BDSIZE	9	9
DSHARE	0.002276	0.002
COSIZE	64180	64180
GEAR	2.2045	2.2
PROF	0.1627	0.16
LQDT	1.18	1.2
MULTIN	0	0
LSTAT	1	1
MLIST	0	0

19. Debenhams		
Variable	**DB2008A**	**DB2008D**
KPISCORE	0.022058824	0.02
WCOUNT	0.005629881	0.006
COMP	0.78	0.8
PNED	0.75	0.8
AUDSIZE	3	3
BOARDM	6	6
FINEXP	0.5	0.5
BDSIZE	8	8
DSHARE	0	0
COSIZE	1959300	1959300
GEAR	1.2838	1.3
PROF	0.0576	0.06
LQDT	0.17	0.2
MULTIN	1	1
LSTAT	1	1
MLIST	1	1

20. Paypoint		
Variable	**PP2008A**	**PP2008D**
KPISCORE	0.04958678	0.05
WCOUNT	0.01651194	0.02
COMP	0.89	0.9
PNED	0.6666667	0.7
AUDSIZE	3	3
BOARDM	9	9
FINEXP	0.5	0.5
BDSIZE	6	6
DSHARE	0	0
COSIZE	102492	102492
GEAR	0.0082	0.008
PROF	0.1433	0.14
LQDT	1.07	1.1
MULTIN	1	1
LSTAT	1	1
MLIST	1	1

Appendix 3: Logistic Regression Results (KPI)

The following model was used in the computation of the logistic regression:

$$KPI = \beta_0 + \beta_1 PNED + \beta_2 AUDSIZE + \beta_3 BDMEET + \beta_4 FINEXP + \beta_5 BDSIZE + \beta_6 DSHARE + \beta_7 COSIZE + \beta_8 GEAR + \beta_9 PROF + \beta_{10} LQDT + \beta_{11} MULTIN + \varepsilon_j$$

Variable explanations are provided in Table 24. The results are as follows:

Table 30: Logistic Regression Results

Variables	B	S.E.	Wald	df	Sig.
PNED	-2.699	1.141	5.595	1	.018
AUDSIZE	-.652	.250	6.795	1	.009
BDMEET	.412	.101	16.716	1	.000
FINEXP	.357	1.086	.108	1	.742
BDSIZE	.454	.123	13.646	1	.000
DSHARE	9.866	1.658	35.402	1	.000
COSIZE	.043	.017	6.614	1	.010
GEAR	1.001	.232	18.645	1	.000
PROF	13.354	3.229	17.107	1	.000
LQDT	-.054	.284	.036	1	.850
MULTIN	1.099	.497	4.885	1	.027
Constant	-7.642	1.528	25.013	1	.000

		Hosmer and Lemeshow Test	
Cox & Snell R Square	.534	Chi-square	10.170
Nagelkerke R Square	.711	df	8
-2 Log likelihood	127.830[a]	Sig.	.253

From the results presented in Table 30, it can be seen that the Cox & Snell and Nagelkerke R Square are 51.3% and 71.1% respectively. The coefficients results reveal that COSIZE and MULTIN have a positive significant relationship with KPI disclosures at the 95% level of confidence. BMEET, BDSIZE, GEAR and PROF were found to have a positive significant relationship with KPI disclosures at the

99% level of confidence. PNED and AUDSIZE were found to have a significant but negative relationship with KPI disclosures.

COSIZE may be suggested to have a relationship with KPI disclosures since larger companies are in the public limelight and this could be a reason why such entities may wish to disclose KPI information as a self-governance mechanism and in the long run avoiding stringent regulations and regulatory restrictions being placed upon them (Al-Khadash and Abhath Al-Yarmouk, 2003). BDSIZE was also found to have a significant positive relationship with the disclosure of KPIs, this finding may be partly explained by the fact that companies with larger boards will possibly have the human capacity to have specialists in specific areas of the business therefore encouraging closer monitoring of performance and reporting of the critical success factors of the particular business entity.

Gearing was found to have a positive significant relationship with the disclosure of KPIs, this finding may be a consequence of the fact that although private companies are thought to have smaller investor base. These individuals and/or corporations will be concerned by high gearing therefore in a bid to retain investors, such companies will make efforts to disclose performance updates to retain investors as well as attract potential investors. In some cases it has been found that high gearing among businesses is partly a result of future business prospects. Where an investment opportunity has been identified, then companies will wish to secure funding so as to take advantage of the investment opportunity which would hopefully pay dividend in the future but the initial investment outlay having been brought about by leveraging.

According to the findings, it was revealed that companies that are more profitable tend to disclose KPIs while companies that are least profitable disclose

minimal or no KPIs at all. A positive significant relationship was identified between KPI disclosures and profitability. When private companies perform well, they are more likely to report as much of this good news for several reasons, such as strengthening relationships with suppliers through a strong display of going concern. Private companies seldom disclose profitability information for the purpose of securing further investment as is the case with public listed companies. This is mainly to do with the fact that their stocks are not tradable therefore they do not have an extra drive to reveal their superior financial performance. From the results of the logistic regression it was also noted that there is a positive significant relationship between multinationality and KPI disclosures. As can be expected, companies that operate over larger geographical regions have the incentive of reporting more KPIs to secure investment and reassure those investors of the firm's going concerns among other reasons. Larger geographical expanses are also likely to entail that companies affected are subjected to specific restrictions for the region in which they operate, for instance the requirement to disclose KPI by the CA 2006 in the UK.

The number of board meeting held within the trading period under scrutiny was found to be positively and significantly related to whether a company discloses KPIs or not. Companies that have more frequent board meetings are thought to have more opportunities to iron out any existing or potential problems within the relevant company. Private companies have a narrow shareholder base and these shareholders have significantly larger holdings than shareholders in public listed companies where the shares are traded publicly. as a consequence of private limited companies having fewer and higher stake shareholders, these individual or institutions are likely to demand more information from the management particularly relating to deliberations from board meetings. It may also be suggested that more frequent meetings allow

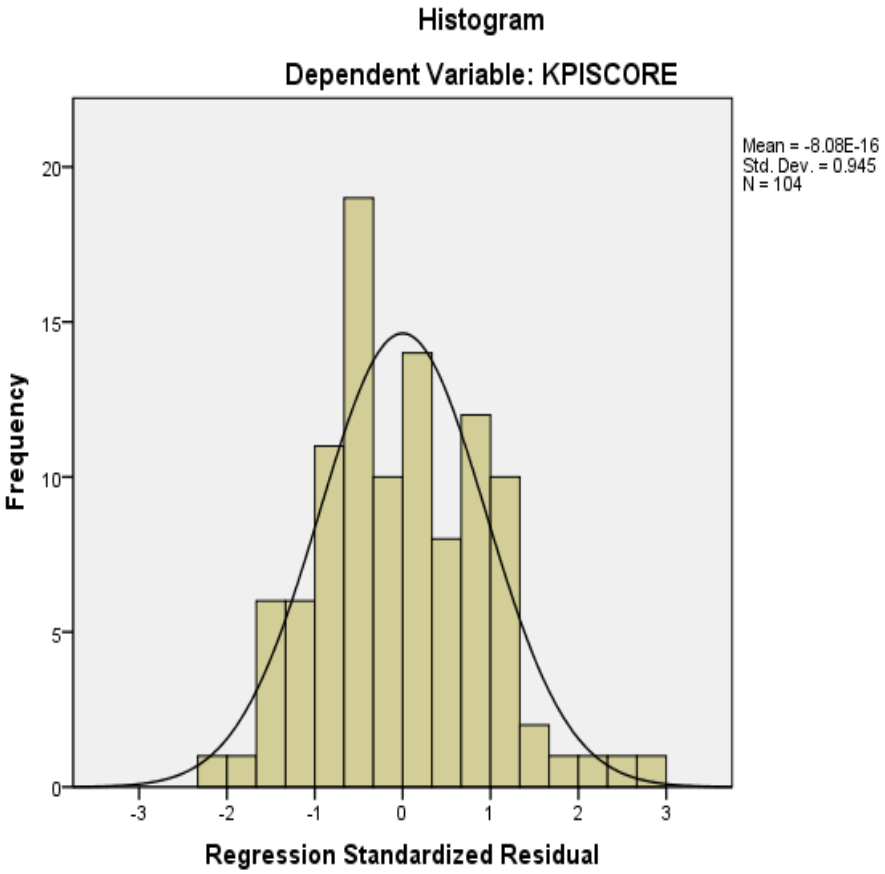
for better communication among the board, better efficiency and thorough resolving and follow up of problematic matters within the company. This information is a great interest to private company stakeholders as they have higher stakes so demand more detailed disclosures.

The proportion of non-executive directors was found to be negatively significantly related to whether a company discloses KPIs or not. Due to private ownership and control structure, the appointment of non-executive directors by private limited companies is likely to be influenced by the close relationship between managers and the prospective non-executive directors. Chen and Jaggi (2000) suggest that where there is a close relationship between management and the non-executive directors, the non-executive directors are likely to support the policies and philosophies of the management. The results suggest that in the case of private limited companies, there is a compromise of control where non-executive directors are appointed. It may further be suggested that non-executive directors are less effective when operating in private limited companies.

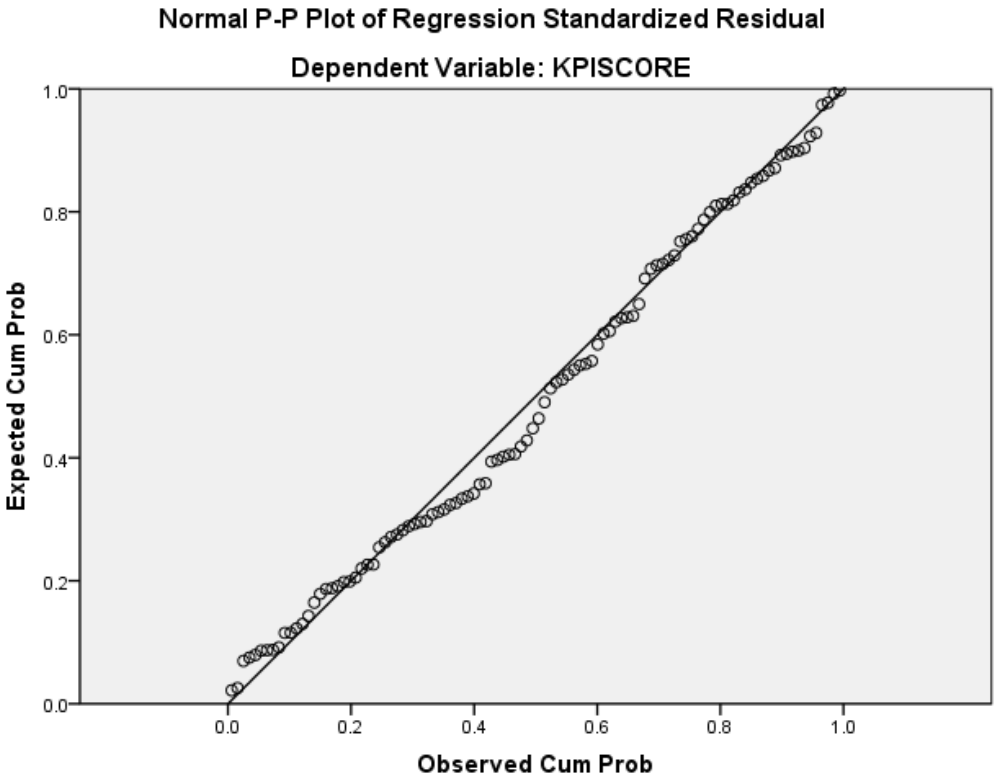
The size of the audit committee was also found to have a negative significant relationship with whether private firms disclose KPIs or not. This is not an unusual finding since audit committees mainly consist of non-executive directors (see for example Ho and Wong, 2001c p.144). The results of the study suggest that the establishment of an audit committee within private limited companies is not necessarily an effective measure of attenuating agency costs.

Appendix 4: Private Companies Sample Normality Checks, P-P Plots and Scatter Plots

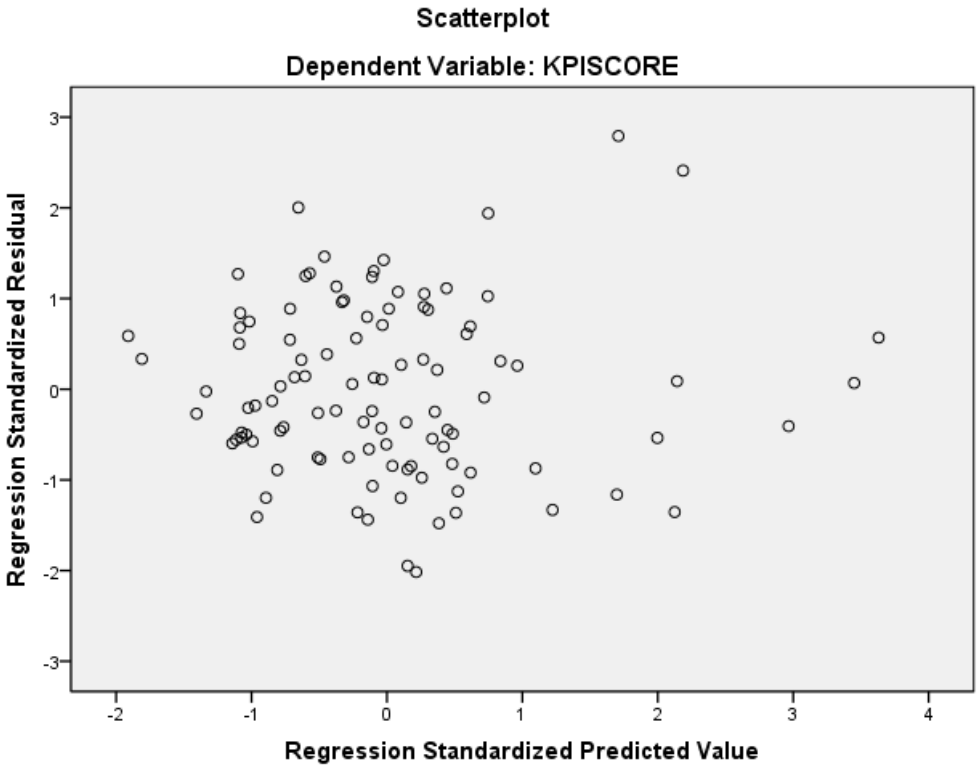
KPISCORE Normality Check



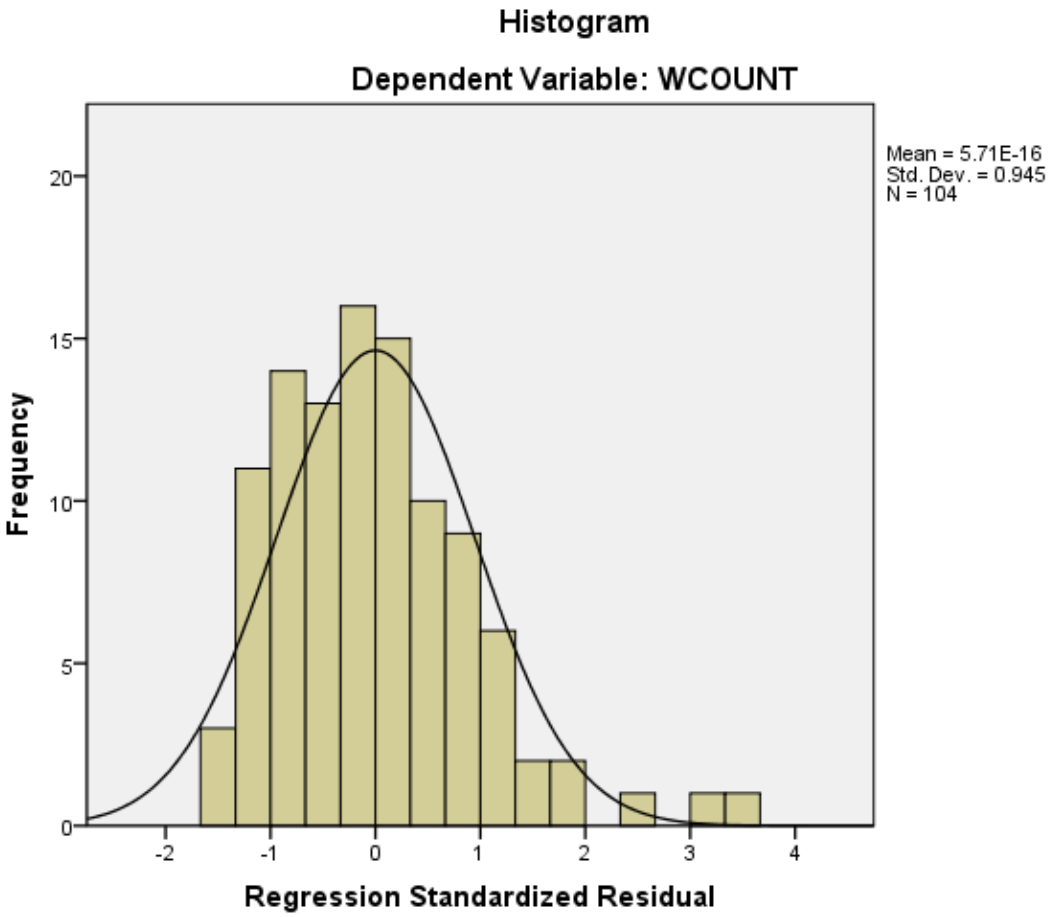
KPIscore Normal P-P Plot



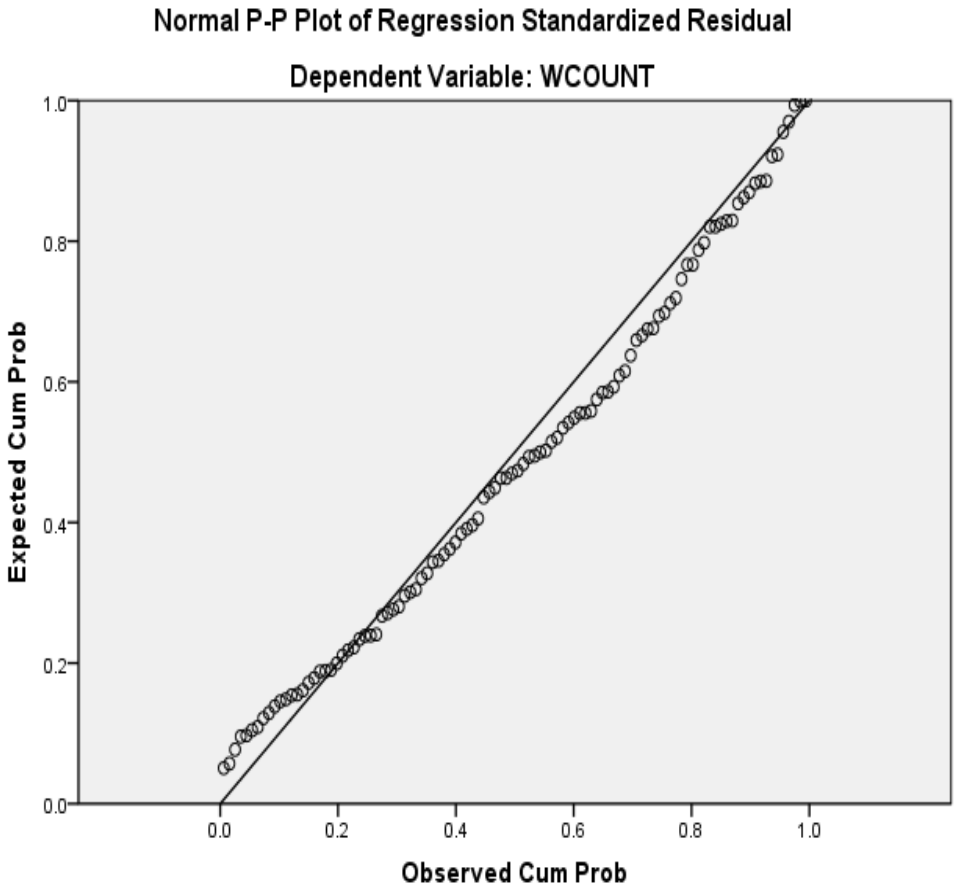
KPIscore Scatterplot



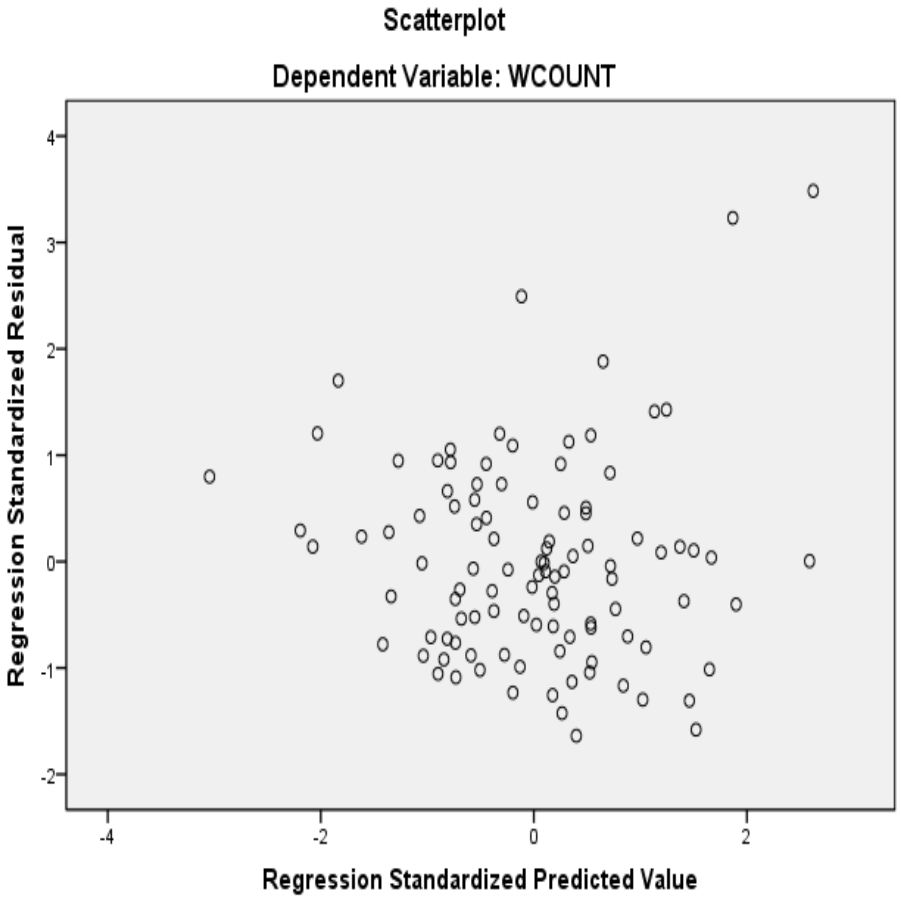
WCOUNT Normality Check



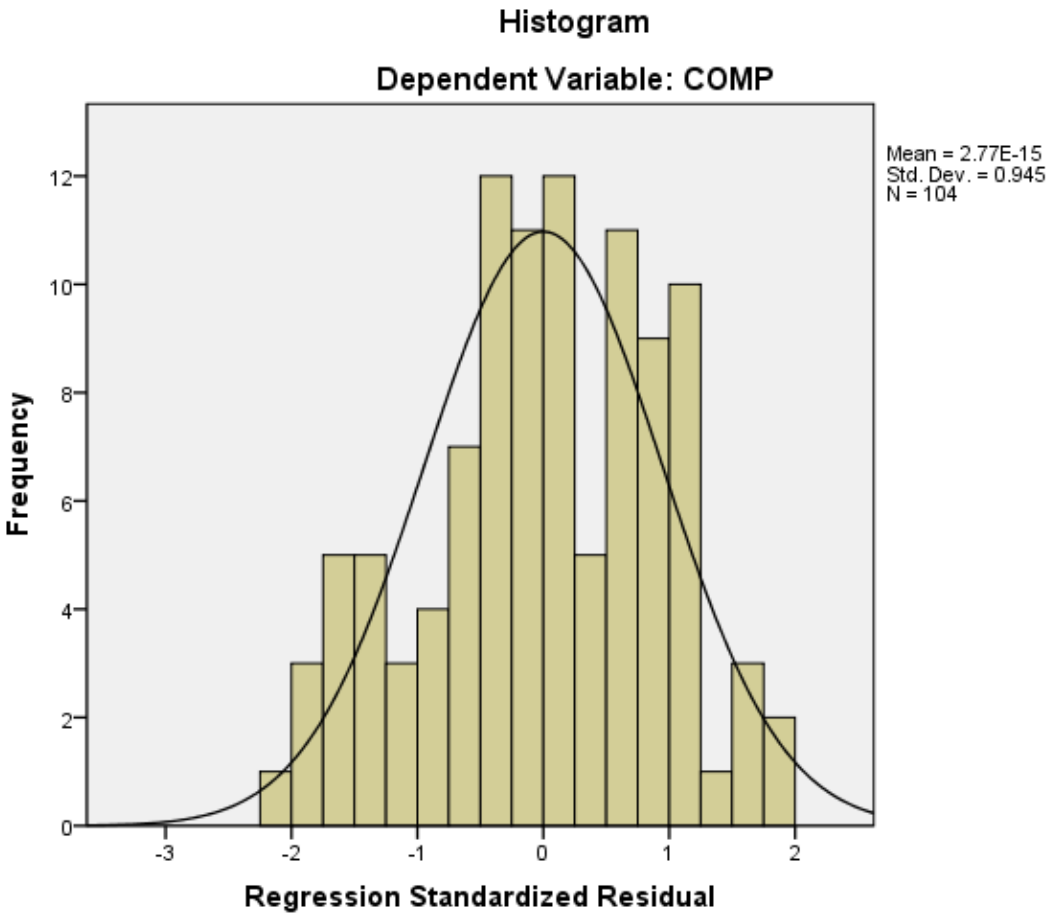
WCOUNT Normal P-P Plot



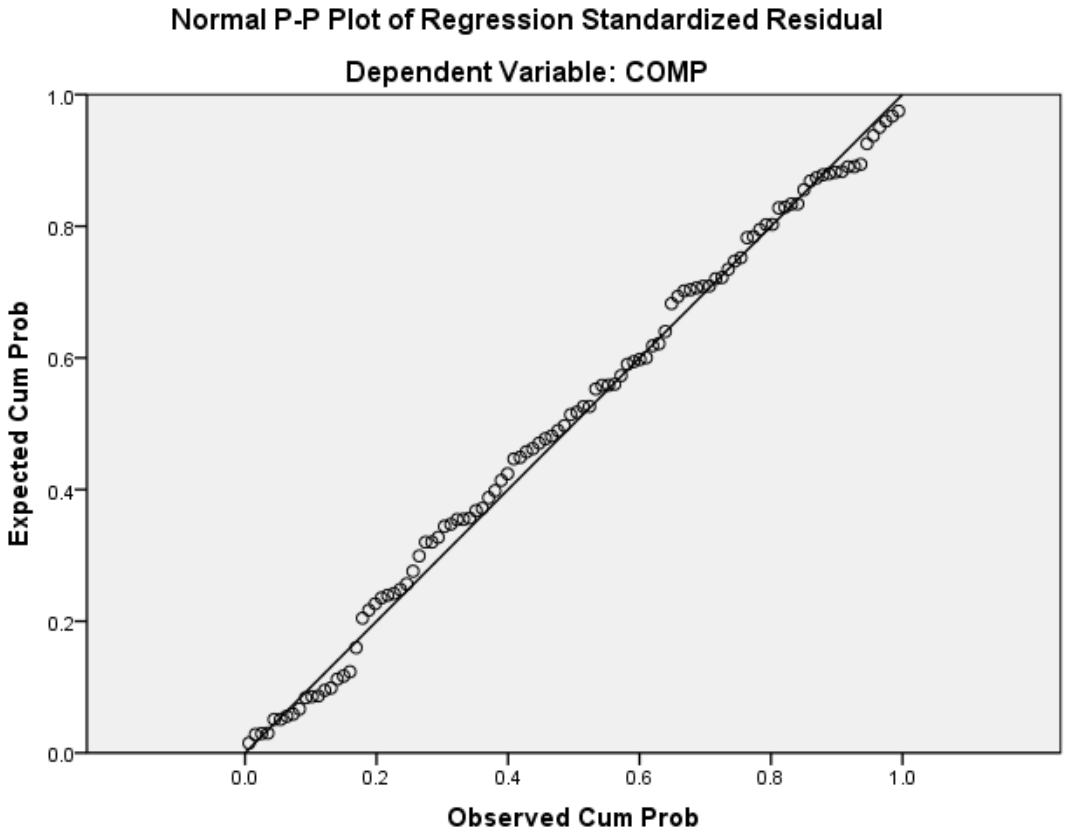
WCOUNT Scatterplot



COMP Normality Check

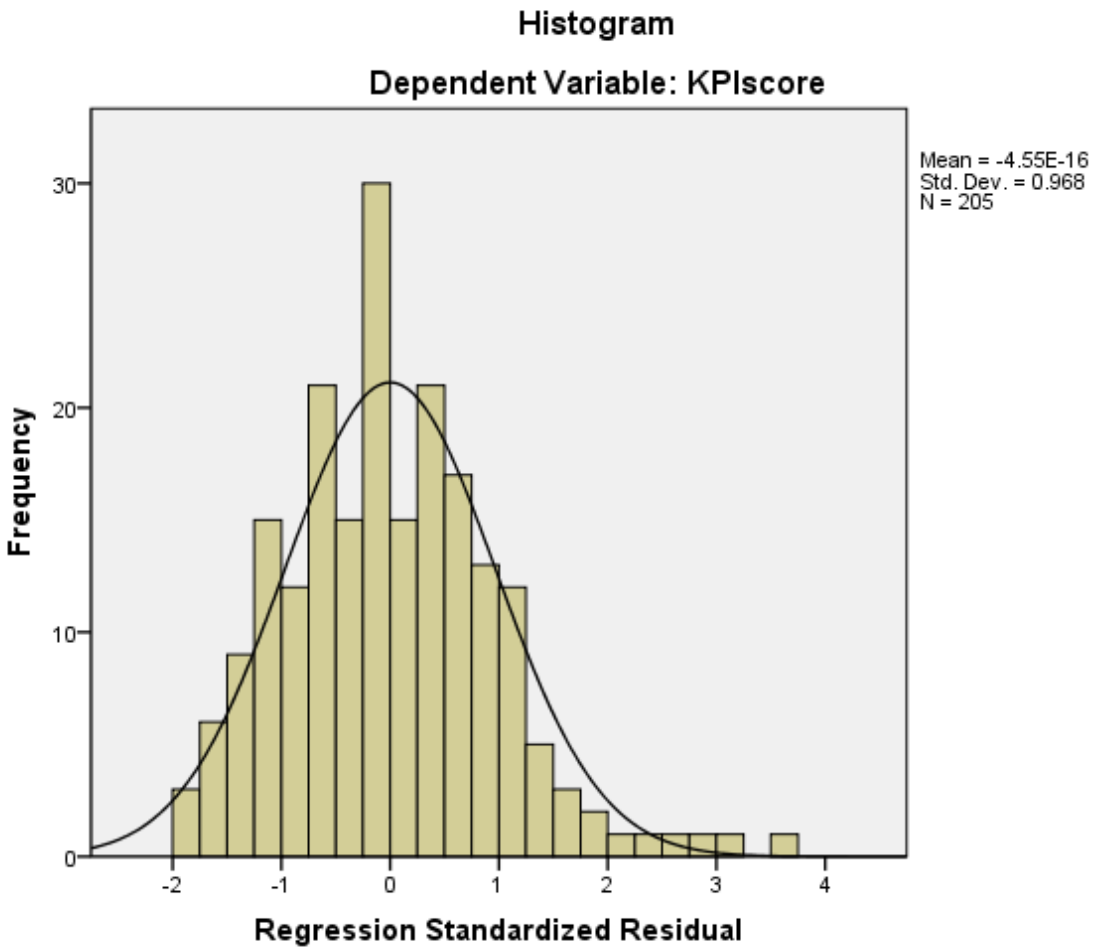


COMP Normal P-P Plot

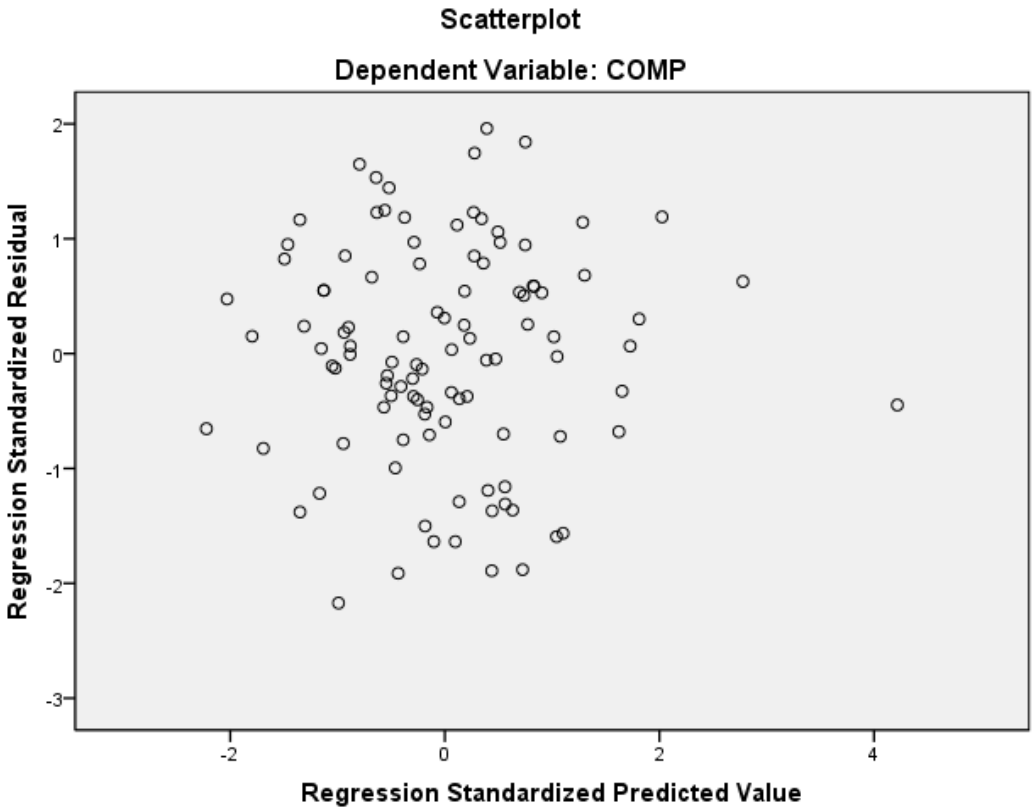


Appendix 5: Public Companies Sample Normality Checks, Scatter Plots & P-P Plots

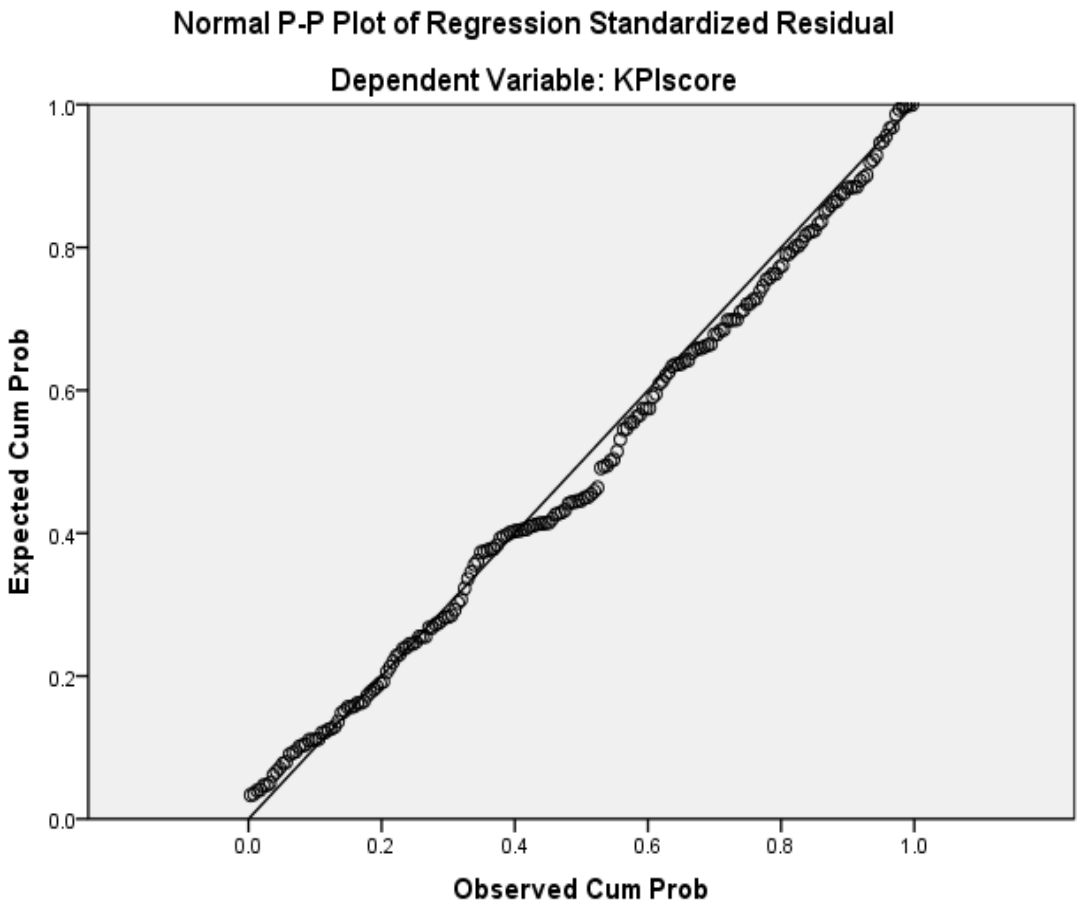
KPISCORE Normality Check



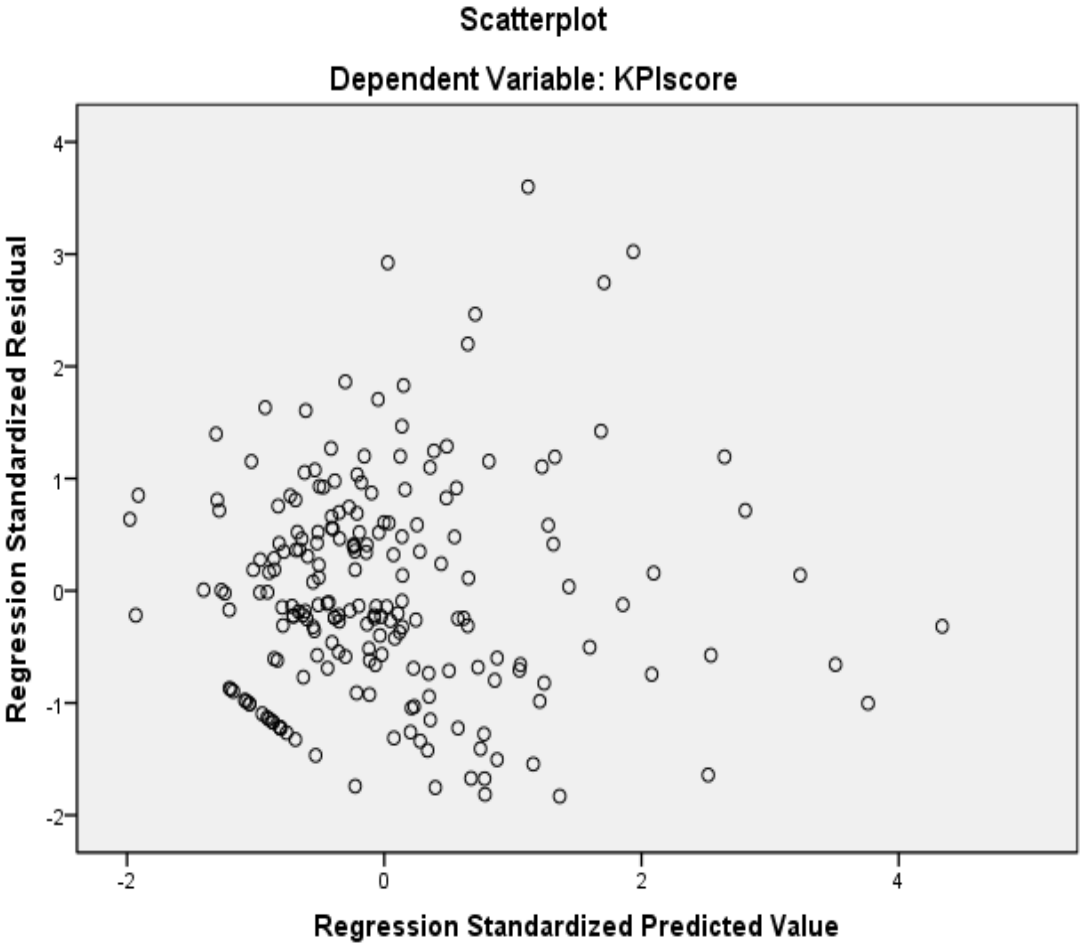
COMP Scatterplot



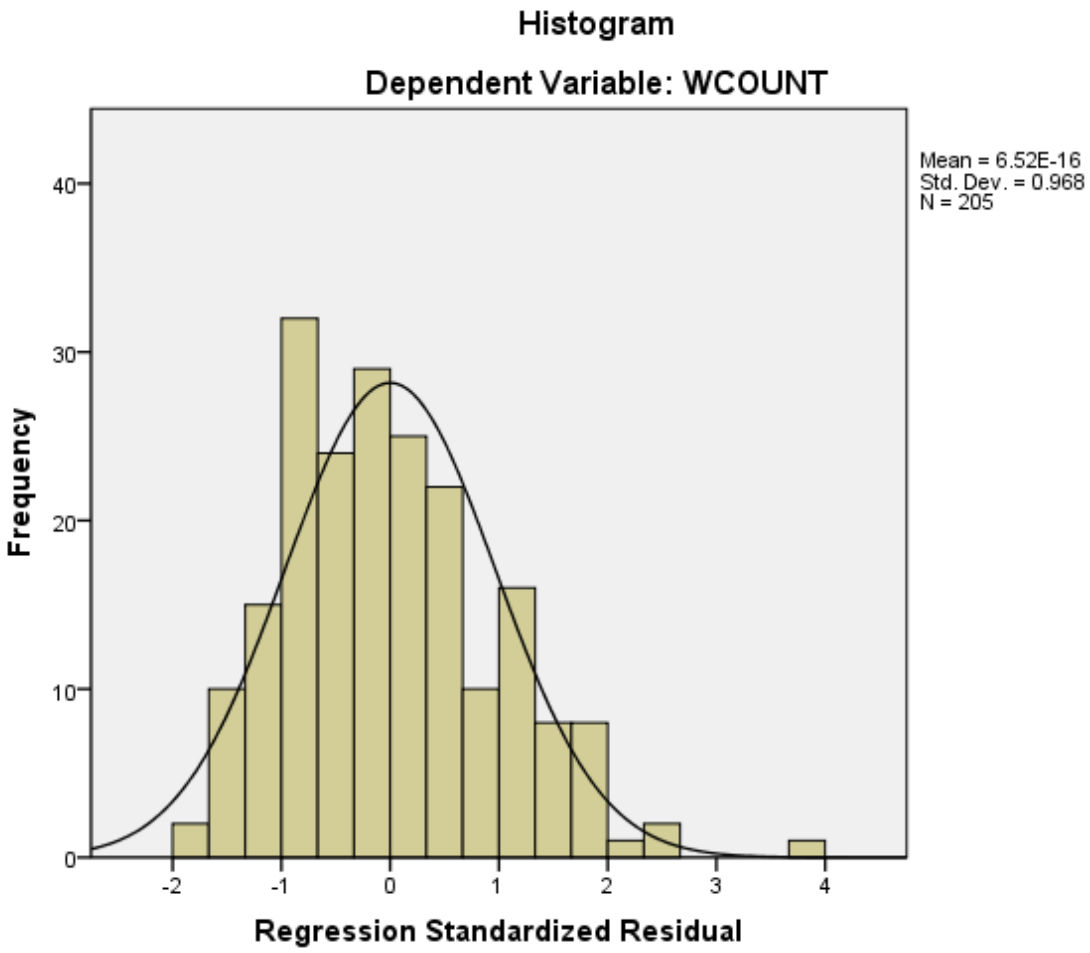
KPISCORE Normal P-P Plot



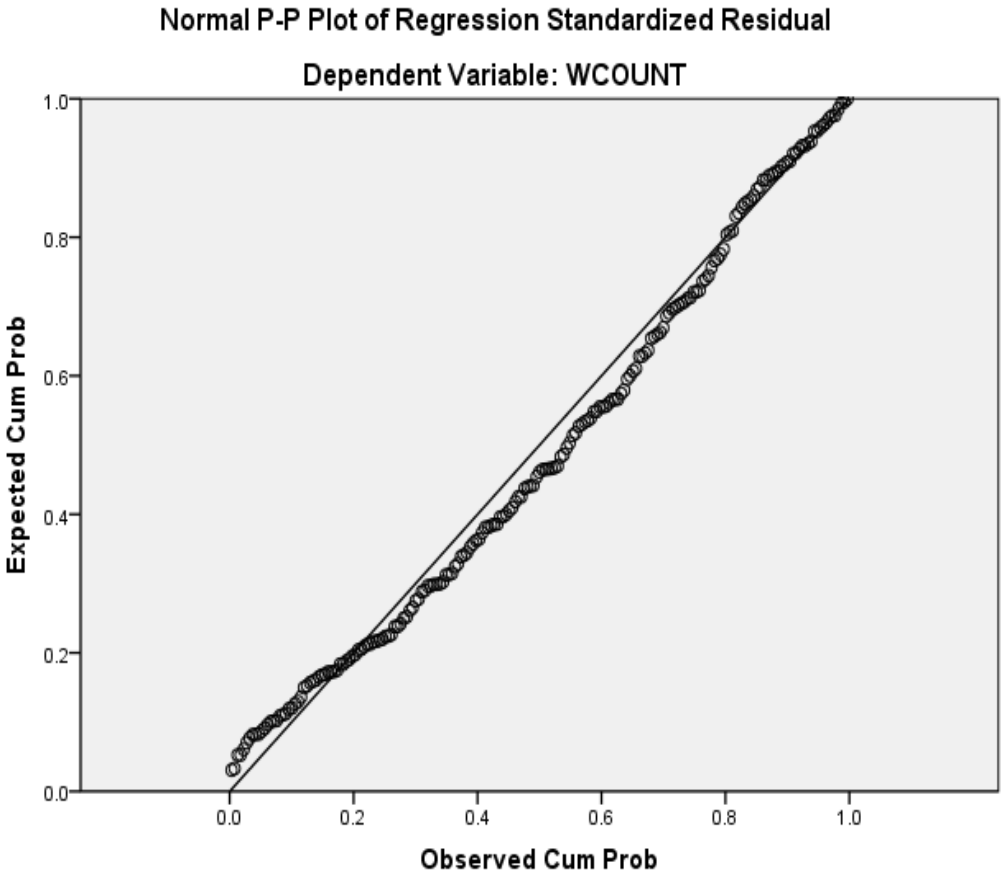
KPISCORE Scatter Plot



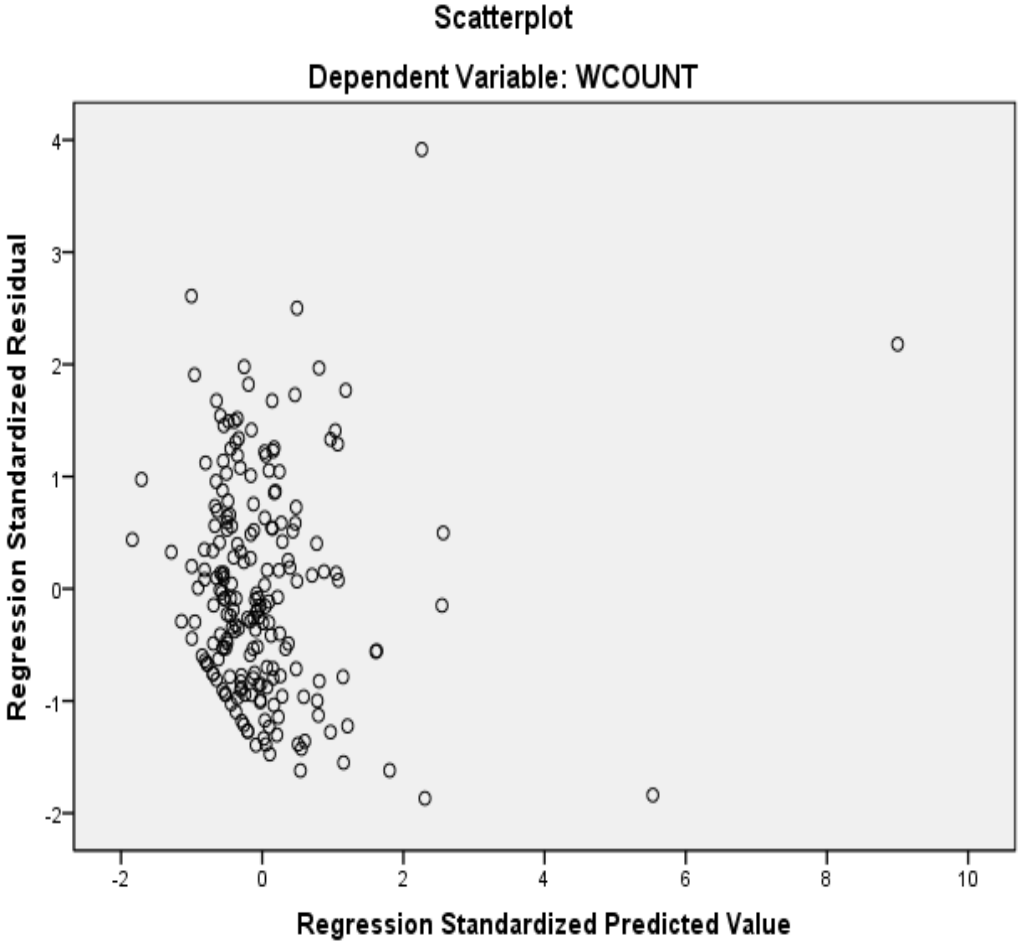
WCOUNT Normality Check



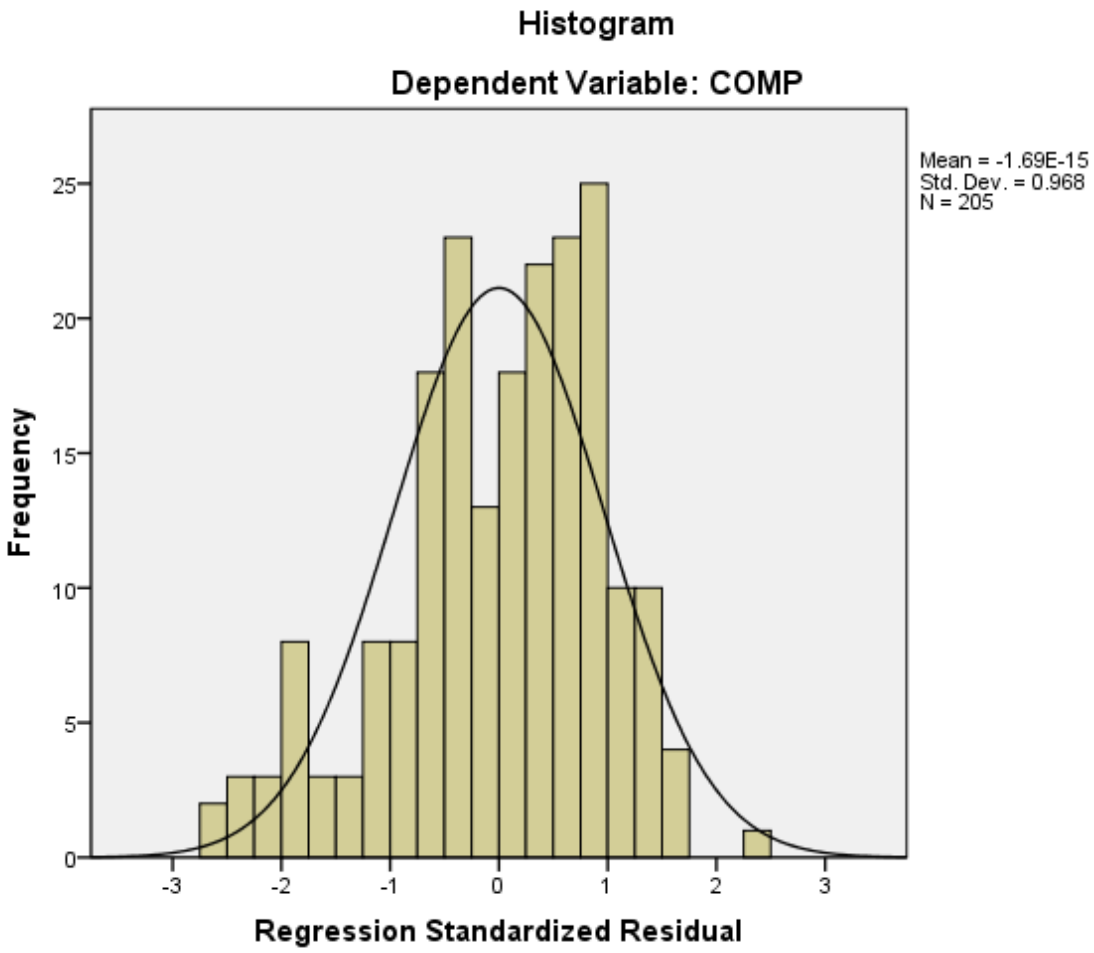
WCOUNT Normal P-P Plot



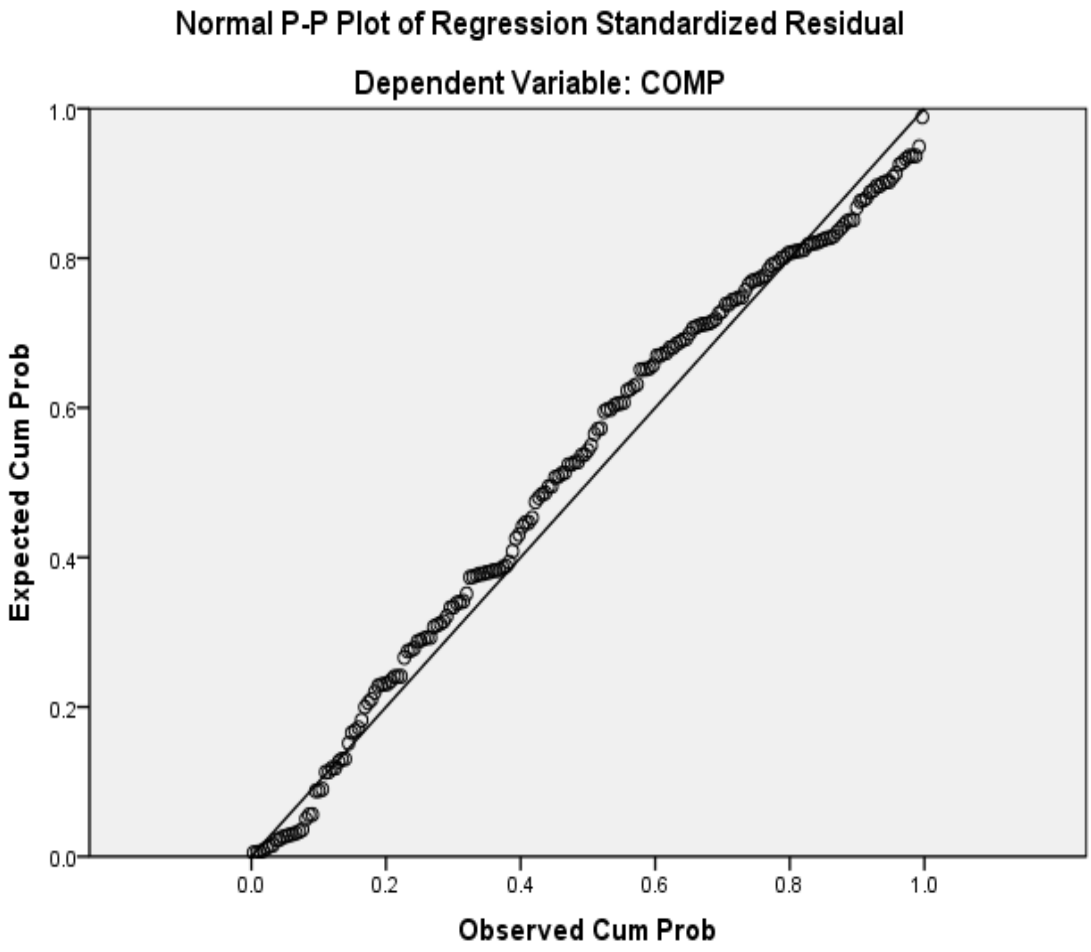
WCOUNT Scatter Plot



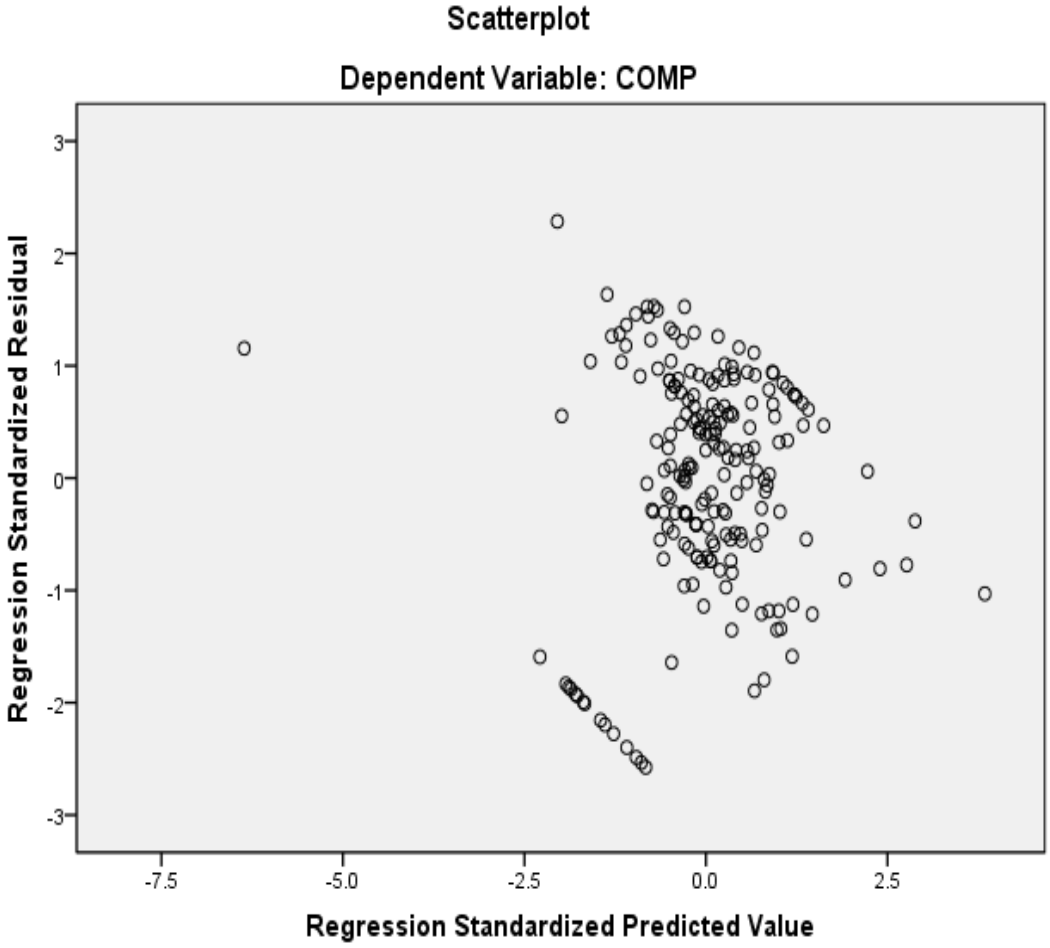
COMP Normality Check



COMP Normal P-P Plot

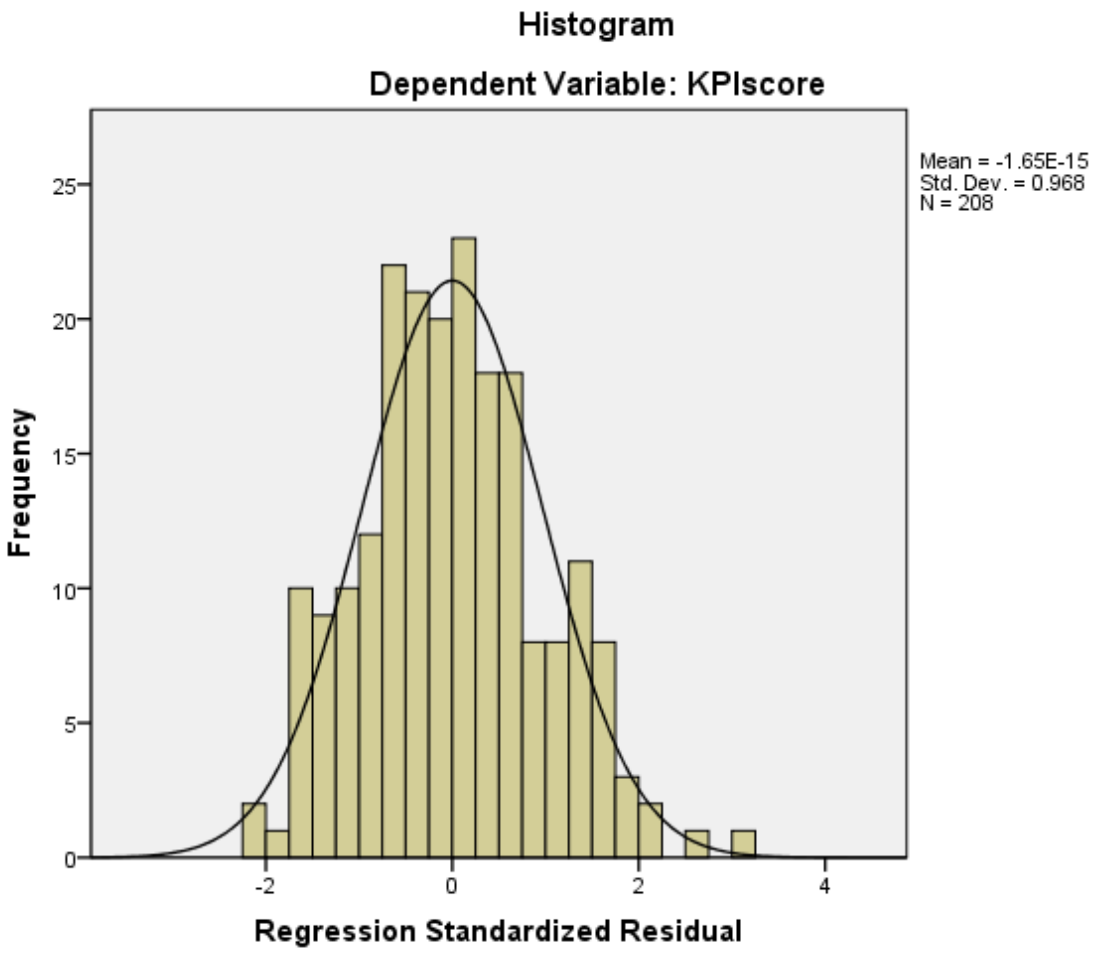


COMP Scatter Plot

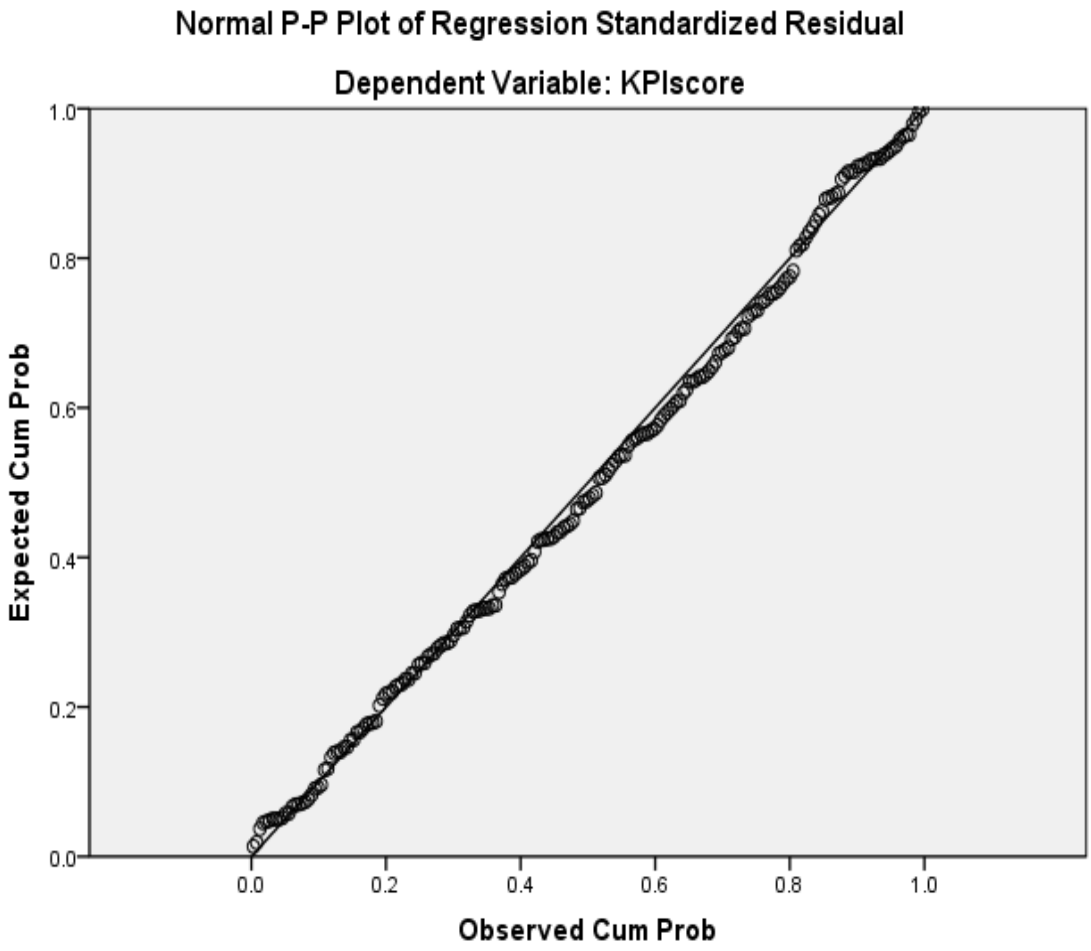


Appendix 6: Pooled Companies Sample Normality Checks, P-P Plots and Scatter Plots

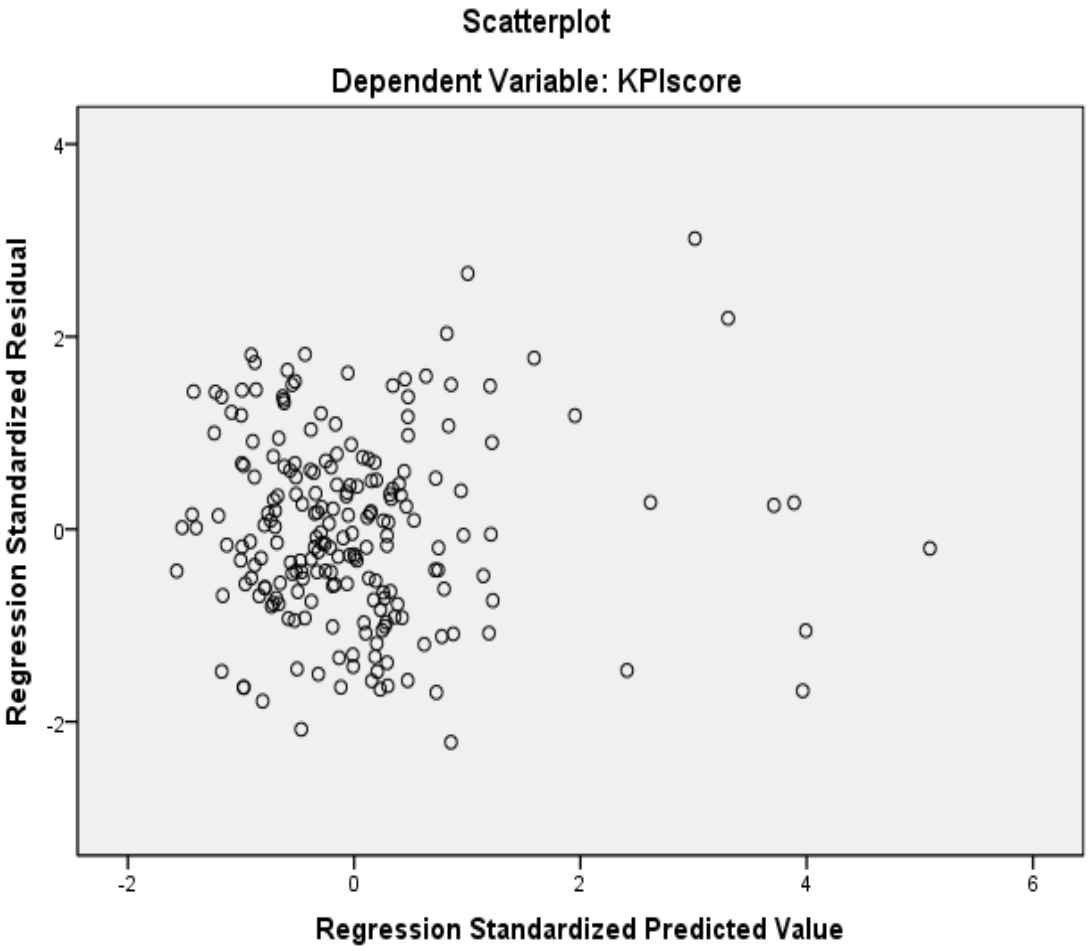
KPISCORE Normality Check



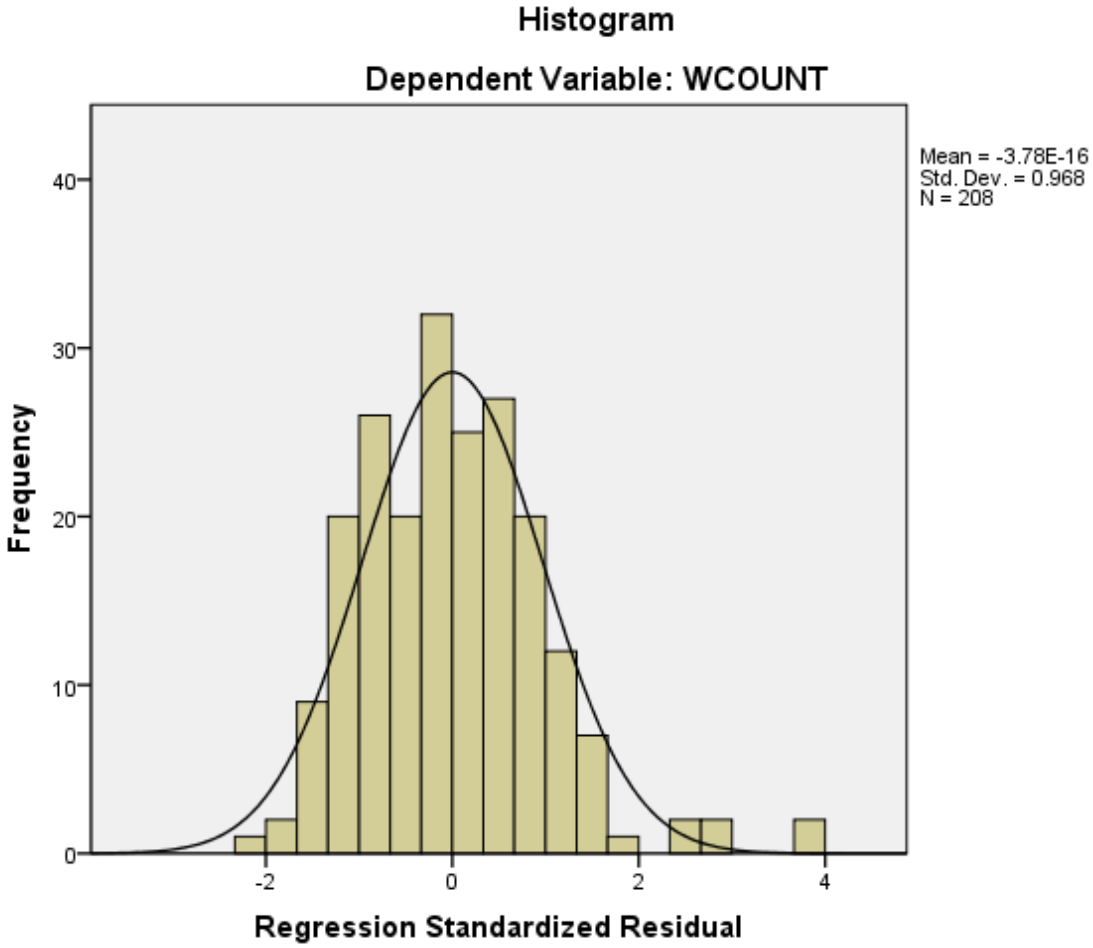
KPISCORE Normal P-P Plot



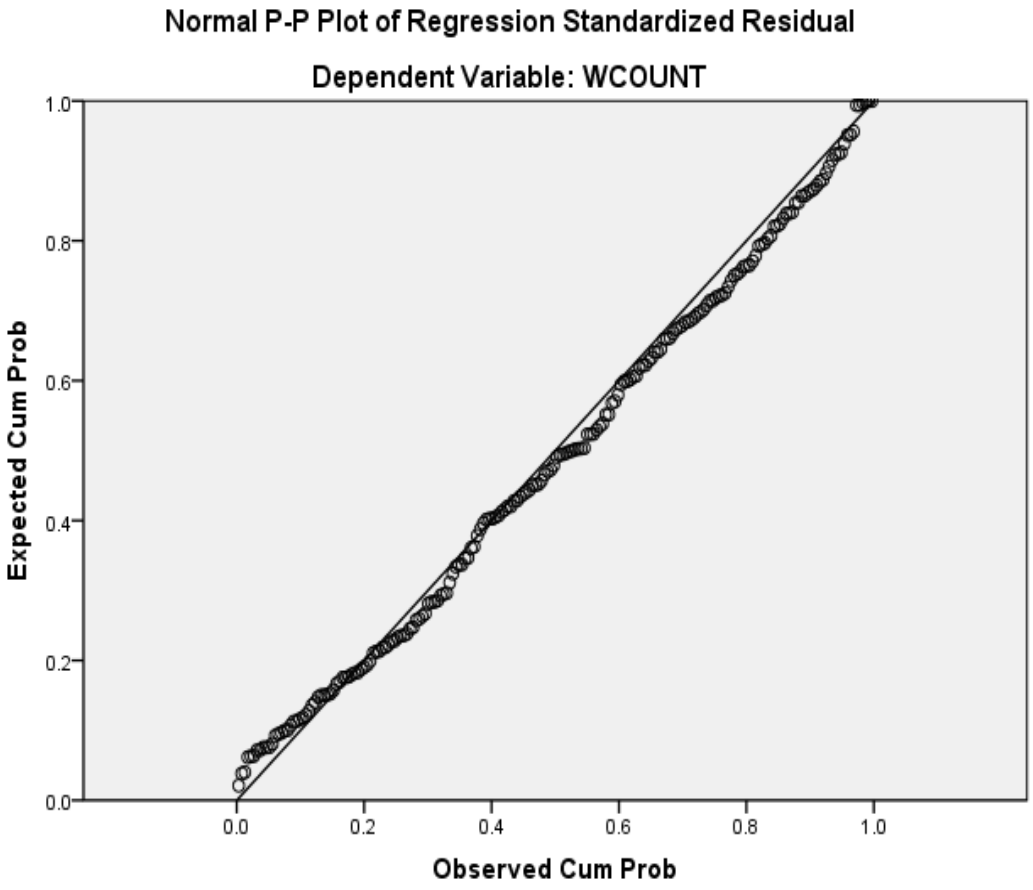
KPISCORE Scatterplot



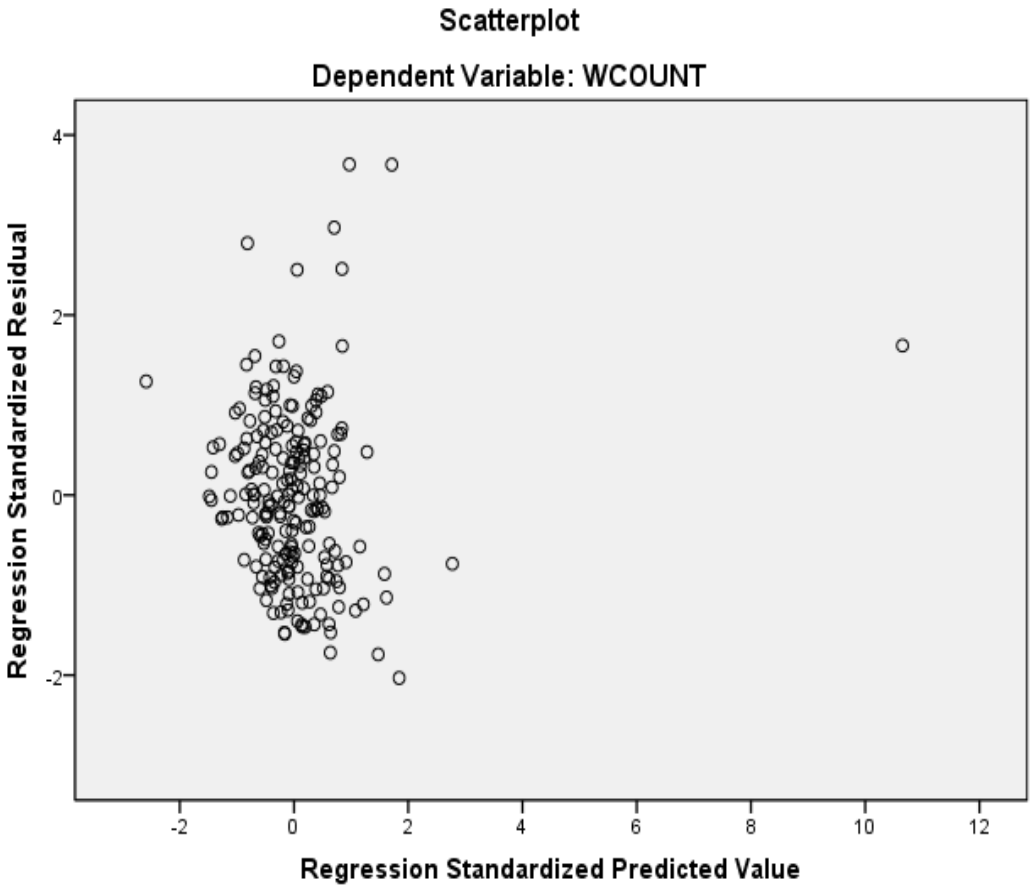
WCOUNT Normality Check



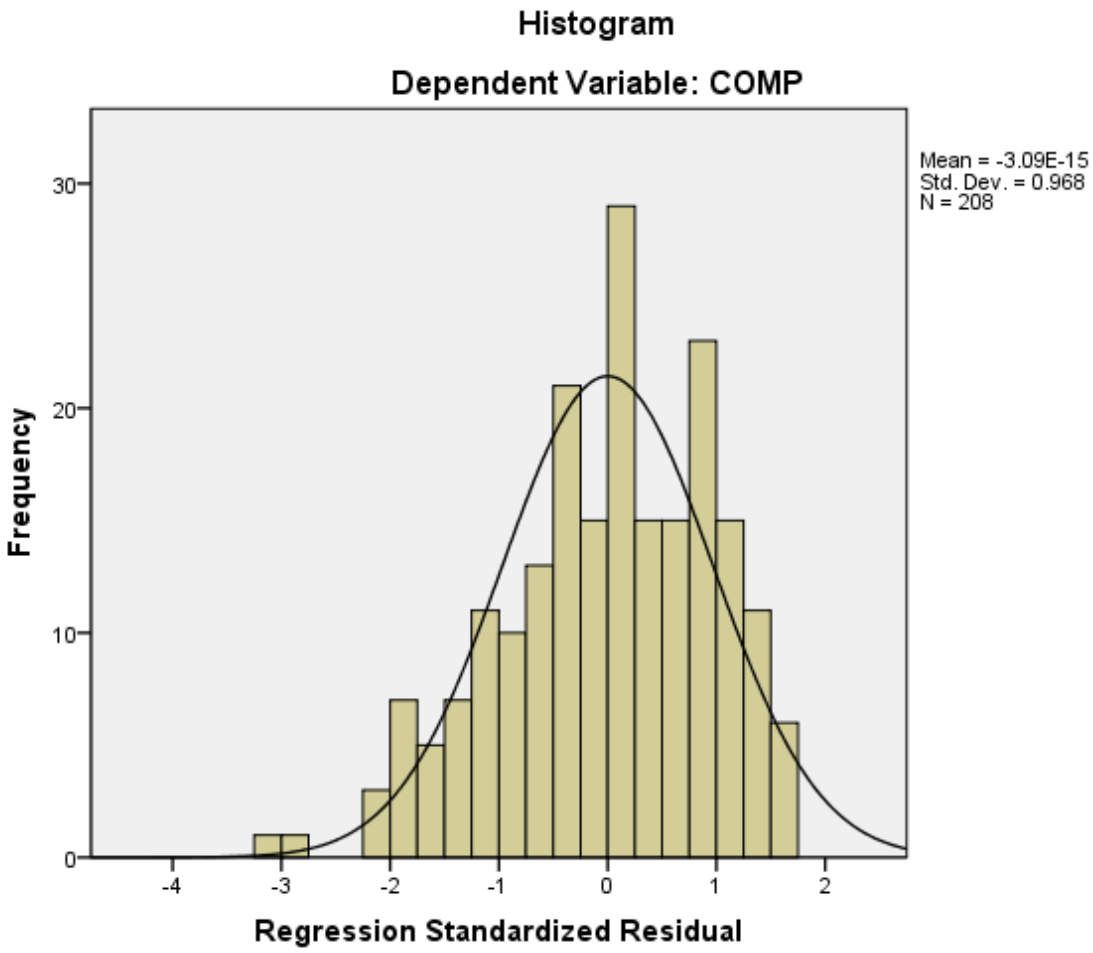
WCOUNT Normal P-P Plot



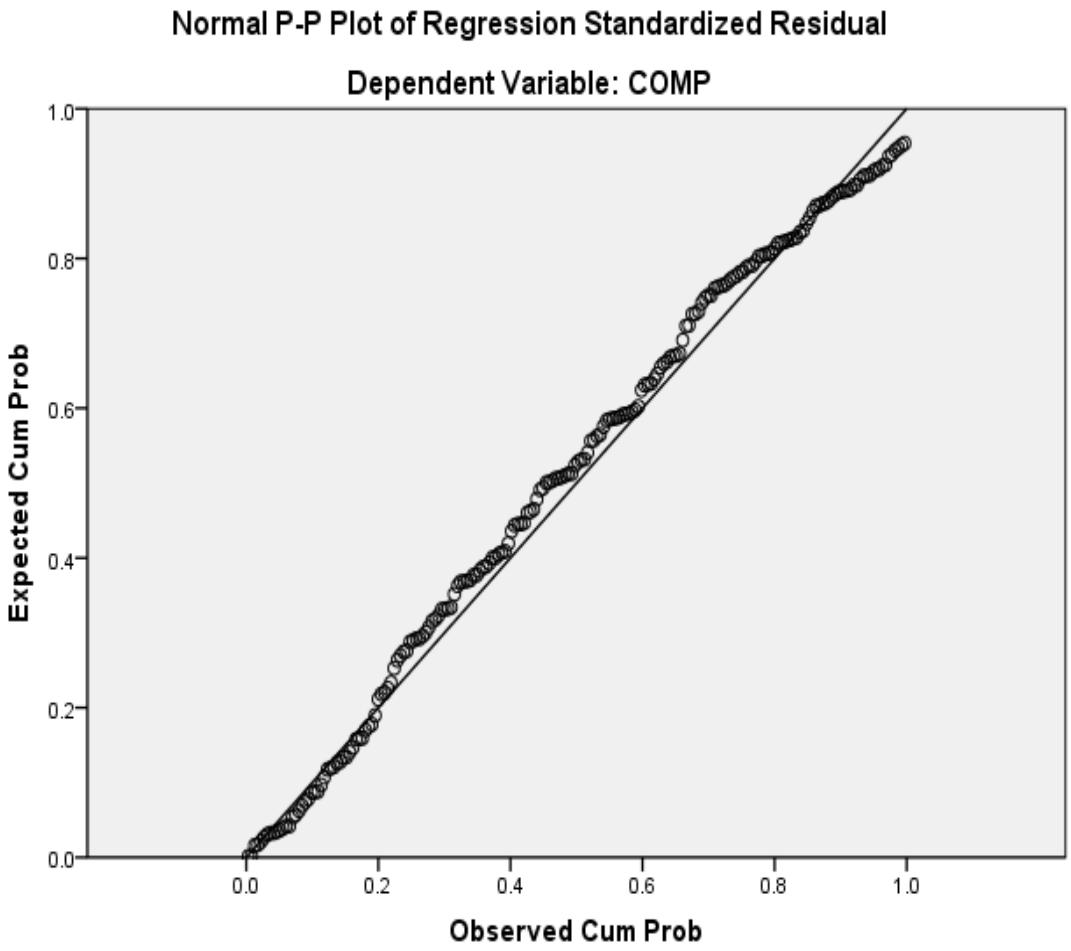
WCOUNT Scatter Plot



COMP Normality Check



COMP Normal P-P Plot



COMP Scatterplot